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THE UNIVERSITY OF ALBERTA

THE ACCEPTANCE AND EFFECTIVENESS OF MENTAL IMAGERY TRAINING IN HIGH PERFORMANCE WOMEN'S VOLLEYBALL

BY

DEBRA LEE COVEY

(C)

A THESIS

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OF MASTER OF ARTS

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The undersigned certify that they have read and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled The Acceptance and Effectiveness of Mental Imagery Training in High Performance Women's Volleyball submitted by Debra Lee Covey in partial fulfilment of the requirements for the degree of Master of Arts.

(Supervisor)

Date: May 11, 1989

DEDICATION

"Feeling good is only a side-effect of
being a good person. Being a good
person is what life is all about."

Tommy Banks

Dedicated to the memory of my mother, Alison Marie Covey, whose continual support encouraged me to go after my dreams and make them come true. A woman of humanity, patience, wisdom, and caring, her spirit guides me through each day.

ABSTRACT

With the psychological dimension of development becoming the focus of preparation for competitive sport it is important to identify the specific dimensions within psychological skills training which influence the learning. It was the purpose of this study to examine the utilization and effectiveness of imagery training on twelve female volleyball players aged 17 to 21. Further, the role(s) of the sport consultant in these processes were addressed. This investigation was a field study which employed case study design through the use of single subject time-series data and participant observation.

The study consisted of a six week period of imagery training which was preceded by a week of familiarization and gathering background information regarding the participants and the program. The imagery training was applied during classroom sessions during the second to fourth week of the study. During the fifth to seventh week the imagery training was applied in actual practise and competitive situations. Self-report monitoring of individual utilization procedures were recorded during thirty minute classroom sessions twice a week. These self-reports measured the subject's perception of idiosyncratic implementation procedures employed during the imagery training, which was used to deal with the factors, processes, and relationships causing stress for the participants. Simultaneously, the sport consultant's role within these processes were observed.

The data for each participant was individually analyzed to emphasize the idiosyncratic patterns and needs. The participant

observation data helped reveal the interrelationships (i.e., with other people and in other aspects of life such as school or family) that contributed to a more holistic understanding of the athlete.

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I THE PROBLEM

A. Introduction

Traditionally, sport excellence was sought with the attitude or "belief that if we master the motions we master the game" (Tutko, 1976, p. 9). This attitude led to the rigorous exploration of human physiology and biomechanics, to the advancement of technical resources, and to an extensive body of knowledge surrounding physical preparation in sport. The creation of comprehensive and structured programs for developing the physical components of sports were the products of this period. Strength training, running programs, dietary and nutritional awareness, rehabilitation procedures, and equipment design were a few of those products.

Over the past two decades, one of the main avenues of focus for sport experts has been the athlete's psychological development. Psychologists, particularly sport psychologists, have joined athletes, coaches, and researchers in the pursuit of sporting excellence. Together, they have discovered that many distinct boundaries which limit athletic performance are largely psychologically self-imposed and therefore, can also be self-controlled and overcome. Further, it was realized that the physical and psychological factors were not separate components of human functioning, rather they were very much interrelated. The functioning of physical and psychological processes could be seen as complimentary to each other. It appeared that athletes, coaches, researchers, and sport pscyhologists have come to believe that it is not necessarily a lack of physical ability that prevented an athlete from winning.

> Physical stamina and finely tuned skill may no longer be enough for competitive sports men and women aiming for the top...there now seems to be a consensus among sports researchers that as athletes move closer to their physical limits scientific technique will enhance performance, but mental strength, and the use of psychological tools, will decide the winners. (Wells, 1988, p. 20, 26).

Typically, an athlete's exposure to sport psychology and sport consultants has been sporadic. For example, a guest consultant joins the team for one session. This session includes a lecture on some basic psychological skills used in sports. Following this, one experiential exercise is conducted which provides the participants with a very limited exploration of one aspect of the psychological information they have just received. Having completed this introductory session, the guest consultant leaves the team, and is not likely to return.

This single-session contact tends to leave athletes with the responsibility of devising their own psychological skills development program and integration procedure. Often, elite athletes have been able to informally develop psychological skills to a fairly advanced level through years of experience at sport competition. However, not all athletes have the wherewithal to do this or the will to dedicate the energy and time to a competitive existence in order to accumulate the necessary psychological skills experientially.

To further compound matters, very little guidance or direction has been made available to assist a coach, athlete or consultant with the establishment of a mental training program. Although scholarly and practical perspectives in sport psychology have developed and advanced considerably in the past two decades, the services it provides are not necessarily readily understood or transmitted to the coaches, athletes,

and support staff. As well, it is one thing to have knowledge but another to be able to apply it in an effective manner. This is perhaps one of the main reasons why so little attention is given to psychological training by athletes and coaches despite their advocating it strongly.

Within the field of sport psychology, particular concern has focused on cognitive skills. Imagery is one cognitive skill considered to have important implications for sport psychology (Mahoney, 1979). Many sport participants have been using imagery for quite some time. Those who have effectively utilized and developed strong imagery skills have done so largely as a result of trial and error discovery, experience, and natural talent. To date, research findings and theoretical work to help guide sport participants in the effective and appropriate use of imagery is limited. Most of the literature during the 1960's and 1970's compared mental practise with physical practise. Little consideration was given to individual differences (e.g., predominant utilization tendencies, ability), the various aspects of the imagery process, or the role of the sport consultant in the training of imagery. Generally, the findings were inconsistent and provided little insight into the imagery process and its effects.

Imagery can be used for many purposes, within the sport environment. Specific technical and tactical aspects, such as arm position relative to leg position in a volleyball forearm pass, appropriate elbow movements in the serving action, or execution patterns such as the first three passes off service reception or team offensive coverage formations, can be practised. If an athlete wishes to feel a specific way emotionally (e.g., confident, energized) imagery

can help generate this feeling(s). What an athlete says to herself when performing (e.g., I am strong and high on blocking or I hope she doesen't serve to me) can affect her performance. To insure this talk is enhancing performance imagery can be used to practise incorporating positive and constructive statements. As well imagery can be used to improve an athlete's stress management abilities. Volleyball players may need to learn to cope with experiences of failure, competiton, cooperation, and injury. Through the use of imagery an athlete can develop a breadth of responses to deal with a certain situation (e.g., if an athlete's typical response to competiton is with fear, imagery can help the athlete experience competition (e.g., serving for game point) as a challlenge and something exciting and fun to attempt (e.g., now is my chance!), thereby providing a varied response to the previously perceived threatening situation (e.g., if I miss this one I'll let everyone down).

B. Statement of the Problem

A popular issue for today's elite athlete centers around psychological preparation. Competitors appear to be facing fewer physical barriers while needing to contend with more psychological factors in their training and competition. To help athletes develop to their fullest potential, it is important to deal with the psychological attributes demanded of them by the environment, the methods and procedures that can be used for developing these attributes, and the conditions affecting this development. Sport consultants can assist in this process. It appears that for sport consultants to best help with this process they also need to identify the attributes demanded of them

by the environment and their clients, the methods and procedures that can be used for developing these attributes, the conditions affecting this development, and the best means of using this knowledge and awareness for the benefit of self, athletes, coaches, and other consultants.

The central purpose of this study was to monitor and analyze the implementation, utilization and effectiveness of an imagery skills training program by a women's university volleyball team. The general program was established by an 'in-house' team sport consultant and tailored to meet the particular needs of the members of a university women's volleyball team. The purpose of the training program was to add the use of imagery skills to the general repertoire of player skills, and additionally, to have the imagery skills training program treated as an integral, functioning, 'everyday ' aspect of the overall volleyball program. This problem was approached through a series of steps and sub-problems. These sought to:

1. Isolate and describe those factors, processes, and relationships in the volleyball environment producing stress for the team members and calling for help from the team sport consultant. With this knowledge or awareness, imagery could be used to help in eliminating, or at least, in reducing specific stresses.

2. Develop and implement an intervention program of imagery skills training to counteract the stresses experienced by the volleyball players.

3. Observe, describe, and analyze whether the imagery skills were being used spontaneously, and hence accepted, and also to determine the effectiveness of this 'treatment battery' for volleyball team members. In other words, how did the treatment battery assist the team members in dealing with stresses and in their preparation for volleyball practises or intercollegiate competition?

4. Identify what the nature of the role of the sport consultant was to be. To this extent, it was necessary to analyze the duties and activities of the sport consultant. Concern for sport consultant involvement (e.g., lack of ongoing presence), skill presentation (e.g., prescription of techniques and action plans for utilizing these techniques), and consulting skills (e.g., listening, building

rapport, developing empathy) were considered. Also important to this issue was whether the sport consultant was accepted by both coaches and team members, and if not, what were the reasons.

5. Identify what the implications were for the future training of sport psychologists? Thus, it was not only necessary to monitor the effectiveness of the imagery skills for the volleyball team members, but also to analyze the effectiveness of the sport consultant in being able to prescribe appropriate psychological intervention skills.

C. Theoretical Perspective

The philosphical attitude adopted by the researcher throughout this study was rooted in the assumptions underlying phenomenology. There are at least three assumptions underlying phenomenology. Specifically, the psychological realities of phenomena are exclusively a function of the way in which these phenomena are perceived. As well, the world reality is not necessarily or directly mirrored by an individual's senses. Thirdly, the experiential world of an individual can be completely known only to the individual (Schultz, 1976).

The phenomenological perspective assumptions suggest that an individual's perceptions and experiences constitute one's reality and also forms the basis for one's actions. It is from this personal viewpoint that an individual establishes a frame of reference or context which strongly influences that person (Schultz, 1976). In other words, how reality is thought, understood, felt, or perceived becomes real to an individual and exists within that person's internal frame of reference or subjective world. This type of approach helps to explain why two people can be involved in an identical set of circumstances and later recall two very different situations (e.g., testimonials of serving for match point in volleyball).

The key to understanding people becomes the subjective experience and empathy of their internal frame of reference. The implications of

this approach suggest some degree of complexity of subjective experience, which can only be understood by reference to the entire person. The entire person is reflected by a holistic awareness, including physical, emotional, mental, and spiritual experiences.

This implication can be related to sport. For example, performance excellence in sport hinges on the interaction of physical, emotional, mental, and social functioning. If a sport consultant assumes each individual's interpretation of her perceptions creates her reality, consideration of ways to develop understanding and empathy for each athlete's frame of reference, must be given. Basically, the sport consultant attempts to develop an understanding of the individual's world view as she experiences it and then uses this knowledge to help athletes manage perception and interpretation of experiences in a positive and benefical manner, thereby moving closer to performance excellence.

Another implication of the phenomenological approach suggests that an individual's psychological perception of reality may be inaccurate and this inaccuracy may have positive or negative influence. For example, an athlete may perceive herself as a weak server, although statistical records and observation would suggest she is a good server. Because she believes she is a poor server she tends to talk negatively to herself when performing the skill (e.g., 'that was a feeble hit, a grandmother could return it') and detracts from her potential to perform the serve better in her own estimations.

Finally, it is assumed that the experiential world of an individual can be completely known only to the individual. It is important to identify what process(es) could be preventing an observer (i.e., sport

consultant) from developing an accurate understanding of an individual's internal world. An individual may restrict overt expression of thoughts, feelings, and actions, thereby witholding information from an observer and restricting the observer's ability to develop an empathic understanding. The individual may attempt to camouflage true thoughts, feelings, and actions by acting or giving overt expression that typically represents other thoughts, feelings, and actions than the ones she actually was experiencing. For example, a confused and unsure athlete may try to portray a confident and 'knowing' athlete to avoid anticipated feeling of embarassment if she admitted to not knowing or understanding.

Imagery is a cognitive-behavioural skill. It has the potential to affect how a person 'thinks, feels, and responds'. Imagery techniques, once learned and mastered, can be used to alter how someone experiences a particular situation, thereby influencing perceptions and interpretations of the experiences. If the imagery is controlled so the effects are desireable and positive, a better, more appropriate, and accurate frame of reference will develop. Imagery would appear to be a skill that compliments the phenomenological perspective.

D. Assumptions

In undertaking this study two assumptions were made. First, the sport consultant anticipated a nice, tight field experiment which would focus on imagery training of, predominantly, technical and tactical aspects of volleyball. Included within these technical and tactical aspects would be actual physical components (e.g., body position, footwork patterns, and force production principles) as well as

psychological components (e.g., confidence, attention, and concentration). However, what the sport consultant actually experienced was a highly charged coach-team dynamic. This influenced the study so the focus of the imagery training became more directed toward coping and stress management uses of imagery. As a result the effects of the treatment on technical volleyball skill development may have been undercut.

Secondly, the sport consultant determined the success or value of the imagery training based on the assumption that each athlete dictated effectiveness. That is to say, that if an athlete tried a technique this was an indication of acceptance of the technique. Further, the athlete's self-perceived effectiveness rating was an indication of the value of the technique to her. Therefore, successfulness of a particular imagery technique was based on the athlete's indication of how useful and valuable it was to her.

E. Importance of the Study

It was hoped that the present applied research project would contribute significantly to both the theoretical and practical understanding of sport psychology. This contribution could occur in four areas. One contribution would be the knowledge gained regarding 'real world' circumstances of the natural setting. Within a field experiment, the participants are allowed to respond in ways that, as closely as possible, resemble their behaviour in the same non-experimental setting. The advantage of applied and clinically oriented field study is the preservation of the 'naturalness' of the situation. Through utilization of field study research increased

awareness and ability to understand the factors influencing psychological skills training may arise. Although some degree of measurement precision and control may be lost with this approach, it is this author's contention that what is gained in knowledge concerning the world's realities about the natural setting such as team dynamics, outweighs the control found in an artifical situation in a controlled laboratory experiment.

Further, it is anticipated that the applied and clinical nature of this study will hopefully provide insight into the significance of individual differences in psychological skill development. Through a better working knowledge of the specific 'real world' factors influencing each individual, potential guidelines for individualization procedures may emerge.

Moreover, knowledge pertaining to the methodology or systematic plan for integrating psychological skills as part of a complete holistic training program may occur. This relates to the sport consultant's role and ability to clearly define and describe the implementation process so that appropriate evaluation can be conducted and recommendations set forth.

Finally, this study may enhance the present technologies available for monitoring and evaluating psychological skill training and development. Understanding of another individual's frame of reference is speculative. In attempting to accurately and completely develop this type of understanding with volleyball players, potentially useful technologies may develop.

F. Organization of This Study

To facilitate the presentation of information revealed in this study, the format of the thesis is outlined here. Specifically, Chapter I introduces the topic and provides a clear statement of the reason for investigation. Sub-problems that must be dealt with are identified. The philosophical approach underlying the researcher's involvement in the study is presented. Implications which may result from the research, are included and finally, the format of the presentation for the final thesis product is outlined.

Chapter II includes the review of literature. This looks at the development of research in the area of imagery, how it is defined, and its role in cognitive, affective, and social development. The relationship between imagery and sport is addressed in regard to stress, anxiety, optimal performance, bodymind integration, competitive sport preparation, and the imagery process. Current trends and future directives are discussed.

Methodology will be dealt with in Chapter III. This section will include the operational definitions and a description of the subjects. The proposed treatment intervention methods and possible factors influencing instrumentation are addressed. A list of the methods used to collect data and statement of the intended analysis of the data are presented. Concerns with internal and external validity, and delimitations and limitations are also discussed.

Chapter IV will document the results of the study. Quantitative data analysis will examine the specific trends, measures, and effectiveness of the imagery program for the participants. The qualitative data analysis will attempt to look at unique individual

qualities along with the idiosyncratic tendencies which emerged during the study relative to the imagery program. Further, data analysis attempts to address concerns regarding the sport consultant's role in competitive sports preparation and implications for future sport consultants.

Chapter V will outline the summary, conclusions, and implications. Based on the results, recommendations for future research will be presented. The thesis chapters will be followed by the bibliography and appendices.

II REVIEW OF LITERATURE

A. Overview

The intent of this literature review was to explore the use of imagery as an integral aspect of athletic development. The primary focus was on how individuals came to master imagey skills and increase their self-awareness, that is, how well did athletes master the implementation and utilization procedures. These processes "when continued with a physical training routine open pathways for the simultaneous experience of physical, mental, emotional, and spiritual dimensions within. This unified approach to athletic experience will develop greater athletic potential and enjoyment" (Hendricks, 1982, p. 16).

The emphasis in sport has traditionally focused on an athlete's physical ability and development. As Weir (1977) states:

> Techniques have been practised solely as technical skills: game situations have been coached only in relation to the ball or to the physical presence of players and methods of play have been connected with players' strength or speed or dexterity. The needs, the feelings, the personality, the self concept of the individual player, together with the influence and pressures of other areas of her life have been largely ignored. At the same time, 'team spirit' was optimistically expected, but the dynamics, the inter-actions and the influence of the group were not considered. (p. 182-183).

The mind and body function as an integral whole. This is to say that thoughts, feelings, and behaviors are interrelated and influence each other. In order to capitalize on this relationship, and to help athletes get the most out of participating in sports there is a need to go beyond tradition and to investigate the individual's psychological dimensions (i.e., mental and emotional) and the consequences for sport enhancement:

> ...it is people who are taught and coached to play sport. There must be real understanding of a person's feelings and reactions before she can be helped to enjoy the game to the limit of her capacity. (Weir, 1977, p. 183).

As noted earlier, this study was concerned with exploring the development, implementation, utilization, and effectiveness of an imagery skills training program provided by a team sport consultant to a university volleyball team. This literature review was an attempt to investigate the general principles and concepts which relate to imagery and thereby develop a better understanding of the imagery construct. The review included aspects of description, structure, and type; necessary conditions for emergence; and the role of imagery in the development of adaptive and appropriate responses (i.e., cognitive, affective, and social). This served to identify the important characteristics of imagery and the aspects of development that imagery may influence. An indepth investigation of imagery as it relates to sport and sport psychology was then conducted. At least five areas were given attention.

First, attention was given to the nature of sport and the ever present necessity to deal with stresses of competitive preparation. These competitive stresses emerge largely due to the continual striving by athletes to consistently maintain an 'Optimal Performance State' (OPS) where body and mind collaborate to allow for best performance. The aspects of stress, anxiety, arousal, and OPS as related to competitive sport preparation are discussed. Second, consideration concerned the major assumptions surrounding competitive sport and the participants involved. Thirdly, this study considered the research findings concerning imagery as a component of competitive sport preparation. Consideration of the interactions, contexts, and times,

when stress or strained conflicts developed and where imagery techniques could be used was given. Finally, the important factors influencing the imagery process in the competitive sport world, such as individual differences and team dynamics, were also studied.

B. Introduction

It is generally acknowledged that "phenomenologically people can and do experience mental representations of objects or experiences...in the absence of stimulus" (Tower, 1983, p. 225). Imagery is a multi-sensory modality phenomena. The phenomena of mental imagery is present in our cognitive, emotional, spiritual, behavioral, and social being. It often occurs spontaneously in everyday transactions and experiences, although it can be a consciously guided experience which is under the control of the imager and stimulated by the self, others, or certain events or experiences. Generally, there are few people who consciously try to learn and better understand how to utilize their imagery ability to full potential. For the most part, people go about their business unaware of instances where, when, or how they are using or not using imagery.

The impact of imagery is vast. The effects extend throughout one's lifespan and influences cognitive, affective, and social development. Imagery has been convincingly established as a significant factor in areas of memory, learning, thinking, perception, motivation, emotion, psychophysiology, and numerous other aspects of human behavior (Sheikh, 1983). Imagery may vary in terms of vividness, context, contents, and interaction with perceptions (Horowitz, 1970). It appears that the experiences that can be created or generated by imagery are virtually

limitless.

As of yet, a universal conceptualization of mental imagery does not exist. To describe imagery with one general label is very confusing for it can be experienced in so many different forms. This elusive nature makes definition, description, and structure prescription problematic:

> It may vary in form - particularly in such characteristics as vividness, controllability, complexity, the specific sensory modality initially represented, the unitary or multiple nature of the modality or modalities, and stability. And it can vary also in content - particularly along a continuum of perception to fantasy; affectively laden to impersonal subject matter; of source of content; of isolation to complexity; and in sequencing and integration. (Tower, 1983, p. 225).

C. Imagery: Structure and Type

To date, experimentation and research has failed to develop a complete theory of image formation. Despite the lack of adequate theoretical, methodological, or definitive evidence surrounding imagery, it continues to be an accepted phenomena. Any categorizing and/or typification has been done phenomenologically, (Horowitz, 1970; Stroshal & Ascough, 1981; & Tower, 1983). With this kind of approach the proposed categories are by no means exclusive and the multitude of terms used are loosely organized. In broad terms imagery has generally been referred to as

> ...1) all those quasi-sensory or quasi-perceptual experiences of which 2) we are self-consciously aware, and which exists for us in the absence of those stimulus conditions that are known to produce their genuine sensory or perceptual counterparts. (Richardson, 1969, p. 2-3).

This total sensory experience involves "experiencing everything, all aspects, all dimensions, in a holistic total experience" (Harris & Harris, 1983, p. 98).

To gain a deeper understanding of imagery, a description of the phenomena into differentiated categories can help. For instance, Horowitz (1970) categorized images into the four areas of vividness, context, interaction with percepts, and content.

The range of vividness extends along a continuum where at one end imagery experiences are characterized by a realness and perception of the object as being external. At the other end are unconscious imagery experiences which were once conscious but due to some conflict have been repressed.

The context in which one forms an image is important for developing a more empathetic understanding of the meaning of that image. As well, imagery plays an important role in explanations of psychodynamics and psychopathology. The context of images is differentiated by the state in which the image occurs, (i.e., twilight state between sleep and wakefulness, sleep state, drug-induced states, and images preceded by physical stress or strenuous physical activity).

It is also useful to be aware of the interaction of the image phenomena contents with perception. This can help determine possible motives for image formation. Images categorized by the interaction with perception are quite often experiences with which most people can relate. Most individuals have had a 'déjà vu sensation' (i.e., where a new experience repeats a past experience) and an 'after image' (i.e., experience where they have been wearing an object for awhile, like a hat or watch, and then having removed the object and, despite there not being a stimuli, there is the sensation of wearing the object). Illusions, negative hallucinations, and perceptual disorders are other examples of categories used to group images according to the

interaction with perception.

An imagery experience can also be categorized based on the content which makes up the experience. Content can be further differentiated into groups characterized by images made up of memory images, creativity or imaginary imagery, entrophic images, body-images, phantom limb, paranormal hallucination or vision, and imaginary companion (Horowitz, 1970).

D. Necessary Conditions for Emergence of Imagery

Regardless of the intended use of mental imagery (i.e., art, writing, sport), there are certain conditions that affect the emergence of mental imagery. According to Tower (1983), the "biological potentials are necessary but not sufficient - they interact with interpersonal and environmental stimuli and events and thus determine imaginal development in complicated, mediated ways" (p. 227).

The three basic conditions necessary for the emergence of imagery are: 1) internal mediators; 2) interpersonal conditions; and 3) environmental conditions. It is the interaction of these factors that regulate the degree and type of mental imagery that emerges (Tower, 1983). The sub-factors within these three areas which influence imagery emergence are neural maturity, affective organization, cognitive organization, predictability and consistency, modeling, time and space, freedom from severe deprivation, and structure in the setting. These are important for the mastery of the imagery process.

E. Cognitive, Affective, and Social Development

According to Tower (1983), there are several distinct benefits to

imagery including cognitive, affective and social. Major cognitive benefits include the facilitation of attention and concentration, and also memory skills through rehearsal of information, strategies for encoding, and the motivation for retention.

Further, there are at least three primary affective benefits which can be derived from the use of imagery skills. First, there is a differentiated sense of self-identity and self-awareness. Secondly, imagery usage improves self-control which is associated with emotional regulation, access to the 'flow' or 'optimal performance state' experience, behavioral control, and intrinsic motivation. Thirdly, imagery can help the development of emotional resources for dealing with stress. Some of the ways this can occur is through imitation, assigning and assuming roles - that is, taking the role of 'loser' and thus gaining mastery over experiences in which she fails - and finishing a happy ending to a traumatic experience.

Moreover, an individual's imagery capacity may originate and flourish from social interactions. These can in turn lead to a host of social benefits. As noted, Tower (1983) delineates at least four. An individual who uses imagery skills may appear more attractive to others; may develop an empathic understanding, and respectful attitudes towards and of others; imagery may enhance and facilitate learning; and the management of social interactions may be improved.

F. Imagery in Sport

The discipline of sport psychology has borrowed many clinical techniques to be used in working with athletes even though these athletes may have no psychopathologic symptoms. Imagery is one tool

that has become popular and strongly advocated by sport psychologists, coaches, and athletes. It is a concept that frequently appears in sport literature. As a universal aspect of human existence, imagery is well deserving of attention in order to explore its role in human athletic pursuits. Imagery and components within have been referred to by a variety of names such as mental rehearsal (Richardson, 1967a), conceptualizing practise (Egstrom, 1964), imaginary practise (Perry, 1939), symbolic rehearsal (Sackett, 1934), implicit practise (Morrisett, 1956), and visuo-motor behavioral rehearsal (VMBR) (Suinn, 1972).

> In the final analysis, it does not matter whether you call it mental imagery, mental practise, mental rehearsal, visualization, or whatever. The important thing is to learn to include all dimensions involved in the situation and to incorporate all your senses in experiencing performance in your mind's eye. (Harris, 1984, p. 98).

Sports exist in an ever changing environment and the participants are also ever changing. These two factors make sport very dynamic. Inherent in this dynamic system are some interesting issues which have become important points in the pursuit of performance excellence. Central to these issues is the characterisitic or phenomena referred to as stress. It is the athlete who can best cope with the perceived stress of the competitive situation who is able to out-perform the opposition. In pursuit of performing her best, the highly motivated athlete places considerable emphasis on creating the proper 'psyche'. Stated another way, a lot of attention is directed towards obtaining and controlling the appropriate stress response(s):

> ...the 'stress response' can be viewed as a function of both physiological and psychological phenomena which include cognitive and affective processes, objectively and subjectively identified environmental factors, psychophysiological processes and behavioral processes. (Rouse, 1984, p. 23).

Stress is basically a function of physiology, cognition, behavior, and environment. In the competitive sport world, the idea of stress management versus its elimination is the focus. Given that today's society usually provides a physically safe and secure environment, far more problems are mental or emotional, that is, psychologically related. In relation to work and general life demands of our modern world, an apt definition of stress is presented by Cox (1982): "Stress is an individual perceptual phenomenon rooted in psychological processes" (p. 18).

How a person perceives and evaluates her world determines the type and level of stress she experiences. An individual can interpret an otherwise neutral stimulus as possessing stress-evoking characteristics. As Selye professed, "it is not what happens to you that matters, but how you take it" (Everly & Rosenfeld, 1984, p. 5). The important factor here is "...that by far the greater part of the excessive stress in clients (*athletes*) life is self-initiated and self-propagated" (Everly & Rosenfeld, 1981, p. 5).

Psychological symptoms associated with stress can be categorized either as mental (e.g., intellectual) functioning which includes utilizing mental skills, focusing and concentrating abilites, or emotional functioning which deals with feeling states and an individual's ability to control them. There are few actual life threatening (e.g., death) situations in sport. Rather most stressors are of a psychological nature such as factors associated with victory, defeat, demotion, academic competition, fear of equipment failure, injury, personality conflicts, and other competition related items.

In many sporting situations, stress is associated with anxiety. It is one of the emotions most commonly encountered and focussed on by coaches and athletes. Often, anxiety is referred to in relation to sport performance. Anxiety results from an individual's reaction to stress. When discussing anxiety as it relates to sport, "the issue really is not whether anxiety is good or bad; the issue is determining which direction your anxiety level needs to go before competition to put you in the best range to perform well" (Kauss, 1980, p. 17). An optimal level of anxiety will vary across individuals and across tasks.

Tomayko (1980, p. 68) says, "that all things being equal, too little or too much anxiety will be detrimental to performance". This statement is based on the Yerkes-Dodson law and suggests that, in order to perform to the best of one's potential, one must learn to identify and create an emotional state which is most conducive for optimal performance. If an athlete is preoccupied with, or distracted by events or experiences (e.g., mistakes), she may have a difficult time trying to integrate the information contained in her experiences into an overall program of personal athletic development. The most successful athlete concentrates on factors and interprets them in ways that promote good performance (e.g., perceiving anxiety as a positive occurance and a sign of high energy rather than perceiving it as a negative occurance of worry or nervousness). Imagery provides an athlete with the opportunity to practise and experience skills that promote appropriate attitudes towards anxiety.

However, the Yerkes-Dodson model does not go uncontested. Empirical trials (Martens, 1972), and reports such as Fenz and Epstein (1967) suggest that the absolute levels of anxiety may be less informative

than the patterns of anxiety change or the methods used by an athlete to cope with anxiety.

Anxiety is often used to refer to levels of arousal that are detrimental to performance. After investigating emotional arousal and motor performance, Oxendine (1980) concluded that particular motor tasks are associated with various optimal levels of arousal and that the optimal arousal state varies from one individual to another. Based on investigation of research evidence, scientific literature, and empirical observations, Oxendine (1980) offered several generalizations concerning arousal-peformance.

Oxendine argued that a high level of arousal is essential for optimal performance in gross-motor activities involving strength, endurance, and speed. Secondly, that a high level of arousal interfers with performances involving complex skills, fine muscle movements, coordination, steadiness, and general concentration. Further, he contends that a slightly above-average level of arousal is preferable to a normal or sub-normal arousal state for all motor tasks. Finally, Oxendine (1980) suggested that for effective use of emotions in motor skills an understanding must be developed of the optimal level of arousal for each activity; of the arousal level of an individual or group at a particular time; and of the necessary skills to alter it.

In sports, the process of establishing discriminative cues (DC) is very important because they help to keep arousal levels at an optimum. DC are stimuli in the athletic situation that are critical factors in performance. DC can indicate increases in anxiety. Once these cues are established, they can signal the implementation of a skill (e.g., imagery) to reduce the anxiety. Initially, this process is a conscious

effort which directs attention to the body and to the situation. As the knowledge becomes assimilated and developed, the attention process becomes natural and automatic (Nideffer, 1976).

Attention and concentration are closely linked to DC. Imagery can help an individual determine the critical factors or DC important to learning appropriate responses to problematic situations and thereby direct attention and appropriate concentration. With practise, the athlete is able to monitor the DC automatically, allowing conscious attention and concentration to be focused on new, generally more advanced critical factors. As increased discriminative ability aids in the organization of information (Tower, 1983), there is a gradual increase in performance (Nideffer, 1976a).

It appears that one differentiating factor for the psychologically trained athlete is how precompetitive anxiety is channelled. To learn to channel this anxiety requires an understanding or awareness of what is causing the stress; a commitment to deal with the problem, developing an action plan, trying the action plan, evaluation of the action taken, and adaptation of the action plan based on the evalutaion. Imagery can help the athlete to learn to work with performance anxiety rather than against it. Imagery skills can train the athlete to focus away from cues that indicate arousal, and to focus on those kinds of cues that help the individual become aware of physical relationships and of where, how, and what the body is doing in response.

In regards to controlling stress and anxiety levels one of the main issues which have come to the forefront as participants pursue excellence in sport is the idea of 'peak experience'. There is an increasing accumulation of evidence "linking specific states of

psychological feelings of athletes during competition with quality of performance. Descriptions by performing athletes show a remarkable level of consistency...highly successful competitions have achieved substantial control over the psychological climate that is associated with their best performances" (Loehr, 1983, p. 1, 3).

Athletes have long been able to achieve states of mental functioning which are highly conducive and facilitative of high, consistent optimal performance. It is only in more recent times that athletes, coaches, and psychologists have begun to describe, identify, and nurture these states. It is this process of actively nurturing the Ideal Performance State (IPS) and developing the skill to 'at will' re-create optimal conditions and states on multiple occasions that sets the great performers apart from the good, and results in the great achievements rather than just good achievements (Orlick, 1986a).

Loehr (1983) and Unestahl (1983) did comprehensive investigations into what is referred to as an 'Ideal Performance State' (IPS). In comparing common characteristics associated with this experience, the term IPS appears to be interchangeable with the terms peak experience (Ravissa, 1977; Maslow, 1967; and Syer & Connolly 1984); peak performance (Gauron, 1984; and Privette, 1981); flow experience (Csiksentmihalyi, 1975; and Zaremski, 1980); and Optimal Performance State (OPS), (Garfield, 1984).

From the analysis of an IPS in competitive sport preparation, at least two conclusions have been drawn. According to Loehr (1983), the component elements of IPS are fundamentally the same for all athletes and across all sports. Secondly, he suggests that an IPS exists for every athlete.

With an understanding, awareness, and control of an OPS, athletes increase the probability of more consistently performing very close to their potential. Developing the skills to assist with creating this OPS could be considered fine-tuning of the psychological climate. The benefits of developing skills to actively nurture an OPS seems best exemplified by Tutko (1978, p. 15):

> Whenever you achieve peak performance, (i) you are physically free--your body is able to move naturally, seemingly on its own, unhampered by tensions; (ii) you are mentally focused, your attention is directed to the action to the here and now. You are concerned only with the activity or making the plan and not thinking about the past or future; (iii) you are in harmony. No part of you conflicts with another; mind and body work together. You are moving with the action and have the feeling of being with it; (iv) you are enjoying it. The experience is pleasurable, not just in terms of satisfaction with the result: it simply feels right.

The characteristic that OPS concept shares with the bodymind approach is the notion that optimal functioning by any individual is a holistic, integrated and a simultaneous occurance:

> ...body, mind, emotions, they operate as one unit. Hence, what you think affects how you feel and move, what you feel affects how you move and think, and how you use you body affects how you think and feel. (Syer & Connolly, 1984, p. 8).

It must be recognized that emotions, mental functions, and physiological (physical) processes are all interconnected. This means that by developing more awareness of emotional states and by learning how to create desired feeling states, an athlete is moving toward a better realization of her overall potential. It has been further suggested by Kauss (1980) that it is one's emotions that provide the energy to act, as well as to direct the expenditure of this energy.

Through sport and imagery skill development an individual can learn that there are two major forces working upon her to influence her

optimal functioning and her ability to adjust or change with these influences. These two major forces are external or natural forces, and internal or self-regulated forces. It is not always possible to control or shape the environment or other individuals in order to satisfy needs and desires. Basically, there is little that any individual can do to control the forces of nature. However, a person can greatly affect the internal forces which influence change and allow her to make adjustments in and/or to her life. She can control changes within herself and thereby indirectly influence her environment and others around her. It then is possible for her to begin to regulate her thoughts, feelings, and responses and to develop more self-control.

The new attitude being adopted in the medical profession and gaining popularity in psychology can be referred to as a 'bodymind approach'. The interactive development of body and mind (bodymind) allows the individual to function as a receptive and reactive unit operating within the environment. The mind and body interact as an interrelated, coordinated, and complimentary unit. This requires the information processing styles to compliment each other. In attempting to explain the split brain research and to provide some ideas on how to use right brain functions to perform better, Evans (1984) stated that typically the left brain is concerned with logical, sequential, linear, numerical, and verbal thinking which is analytically oriented. The other style of processing concerns the right brain and typically the right brain experiences shapes, rhythms, feelings, and visual images in a holistic, simultaneous, and gestalt orientation. Other researchers also support this notion (Unestahl, 1983; Evans, 1984; Pressman, 1980; and Syer & Connolly, 1984).

In today's society, there is a tendency for more processing to be done in left brain style. People must seek out opportunities to develop right brain processing. Sport is an ideal environment in which this can be facilitated. The complex movements, implementation of strategy, and communication between players occur too quickly to be processed in a broken up, sequential manner. Consequently, a more simultaneous, holistic manner of functioning appears more appropriate.

Given that imagery has both a psychological and physiological reality, and is a skill that allows an individual to experience events, situations, and predicaments in a holistic, integrated manner, it can serve to develop adaptive and appropriate responses while maintaining a 'bodymind' approach and attitude. Imagery training can help to further develop right brain processing functions. By developing imagery skills, people can begin to take a more active role in altering their psychological and physical functions. This can contribute positively toward general development cognitively, affectively, and socially for general living and for sporting aspects of life.

Simply by thinking about something, an individual can make it real to her mind and body. Consciousness is unable to distinguish whether the image was an experience just thought about or whether it actually did happen. Through imagery, cognitive thoughts can be altered, which in turn can influence change in beliefs and attitudes.

The sporting society appears to have accepted some general beliefs as fact. The reader's knowledge of these factors is important for awareness of the basis from which other ideas or implications are generated. Some of the main assumptions made within the sporting society are noted by Marsden (1983); Wenz & Strong (1980); Zaichkowsky

(1982): and Gauron (1972). Firstly, it is assumed that superior athletes as a group are constantly seeking to improve performance levels. This superior athletic performance is an integrated psychophysiological process, using both internal and external awareness. Secondly, a person's ability to cope with the perceived stress of the competitive situation determines the differences in performance among athletes of relatively equivalent skills. Thirdly, each athlete is an individual who has individual perceptions, and has her own individual pattern(s) of responding and coping with stress (Zaichkowsky, 1982).

A fourth assumption suggests the stress reactions produce an anxiety syndrome that has specific physiological as well as psychological components that affect performance. Fifthly, a person's capability to cope with stress appears to be directly related to the ability of an athlete to self-regulate the desired physiological state and psychological components. Further, much of the effectiveness in obtaining self-regulation to control stress lies in motivation, psychological self-awareness, and an internal sense of physiological responses.

Another assumption presumes every athlete possesses considerable unrealized potential. People do not really know how to go about releasing their potential, but it is possible for them to learn and ultimately they have to do it for themselves. Finally, the mind affects the body in both negative and positive ways. What goes on inside the head is critical to performance. Development of the mind and exercise of the mind is equally as important for peak performance as it is for the development and exercise of the body.

Imagery is one tool or technique that allows athletes to practise and develop a repertoire of response patterns in relation to stress and anxiety brought on by competitive sport preparation. Imagery requires the individual to function in a holistic, integrated, and simultaneous manner (Unestahl, 1983). In this regard, it appears that imagery would be an appropriate skill to develop for controlling stress levels and feeling states and exploring a 'bodymind' pursuit of excellence in competitive sport preparation.

G. Imagery in Competitive Sport Preparation: Research

While psychologists have been interested in discussing imagery for some time, the enthusiasm of sport psychologists for imagery skills and techniques is a more recent phenomenon. Conclusions concerning the value of imagery in influencing performance and identification of variables which affect imagery, itself, are optimistic. Despite numerous results which have led to positive conclusions, caution must be exercised. Given the diverse application of various methodological procedures, conclusive and consistent results have not always been possible. This diverse nature of investigation has also resulted in discrepancy of observations. What has occurred is an identification of trends which are observed across research studies.

As Weinberg (1982) notes, the origins of mental practise can be traced back to the early writings of Washburn in 1916. Although no empirical data had been collected at that time, she contended that movements of slight magnitude occur when one simply imagines oneself performaing an activity. Jacobson (1932) appears to be one of the initiators of empirical research concerning mental practise. His work

had significant implications for the use of imagery in sport. This early research on imagery provided evidence to support the idea that when an individual imagines herself performing a specific movement, there is accompanying muscular activity. He concluded that mental activity was not confined to closed circuits within the brain, that in fact, muscular regions participated. Furthermore, this muscular participation was specific to those actions being imagined, that is, visual imagery showed muscles of the eye to contract. Since this early work, a large amount of literature exploring the use of mental practise has been generated.

Much of the research compared the effect of mental practise with physical practise. The comparisons were generally concerned with differences between the initial physical performance of a group and its final physical performance. Further, some comparisons dealt with the process of learning a motor skill, retaining a motor skill, or in the immediate performance of a motor skill. Many motor skills were examined including; volleyball serve (Schick, 1970), swimming start (White et al., 1979), soccer kick, basketball jump-shot, pursuit rotor (Oxendine, 1969), one-hand foul shot (Clark, 1960), speech production (Mackay, 1981), ball throwing (Stebbins, 1968), gymnastics (Rouse, 1984), and skiing (Suinn, 1980).

There was little indication in the literature prior to 1949 about how much of motor learning was physical in nature and how much was mental. Twining (1949) obtained results indicating that both physical and mental practises served as a means of facilitating motor skill development, and that, both mental and physical practises facilitated learning.

This suggestion that mental and physical practises facilitate learning was later supported by Clark (1960); Riley and Start (1960); Richardson, (1967a); Weinberg and Jackson (1980); Suinn (1983); Seabourne, Weinburg and Jackson (1984); and Caudill, Weinburg and Jackson (1983). They all further concluded, there was some optimum combination superior to methods employing physical or mental training only to develop motor skill.

However, Richardson (1967a) also pointed out there were some contradictory findings. Negative results were found by Ammons (1951) when he was unable to produce significant changes in subsequent performance when mental practise sessions were incorporated for rehearsal of a rotary pursuit task. Trussell (1952) found no significant improvement in performance of a mental practise group on a three-ball two-hand juggling task. Gilmore and Stolurow (1951) found that the mental practise group declined in performance on a ball and socket task.

In 1982, Meyers, Schleser, and Okwunmbua investigated the effects of a cognitive behavioral intervention for improving the competitive performance of college varsity basketball players. The results demonstrated the cognitive behavioral intervention was associated with improvements in the competitive performance of highly skilled athletes. Failure to produce an improvement in practise performance during employed practise did not directly improve physical performance. However, it may aid by reducing anxiety, setting positive expectations, and building a perception of self-efficacy. Feltz and Landers (1983) support this thought through their propositional statements "mental practise effects are primarliy associated with

cognitive-symbolic rather than motor elements of the task" (p. 45), and that "mental practise functions to assist the performer in psychologically preparing for the skill to be performed" (p. 50). Ryan and Simmons (1981, 1983), found that imagery was more beneficial to tasks located at the cognitive end of a motor-cognitive combination.

Pearson (1983) concluded that the difference between a skilled performer and non-skilled performer was not an attention demand reduction by the skilled performer but rather a redistribution. With the acquisition of high level skill, less attention is required for processing capacity as most skills have become highly automated. More is devoted to alertness, selectivity, or tactic analysis because athletes still need to detect cues or signal and maintain a high level of alertness.

Clark (1960), Corbin (1967), Richardson (1967a), Noel (1980), and Suinn (1983), found that prior experience with a task had influence on effective mental practise. In this regard Feltz and Landers (1983) contend "mental practise effects are not just limited to early learning; they are found in early and later stages of learning, and may be task specific" (p. 46).

In a review of what was known about imagery in sports performance, Suinn (1983) contended that consideration must be given to individuality. Mental imagery will benefit each athlete differently. For example, some athletes will already be close to their potential while others will be farther away (i.e., a seasoned, international competitior is probably nearer her ultimate performance level than a young, novice competitor).

Suinn (1980 and 1983), Orlick (1980), and DeWitt (1980) supported

Jacobson's notion that during imagery, low-gain neuromuscular activity mirror those during actual performance and may account for mental rehearsal effects. This relates to necessary conditions for emergence of imagery, particularly the internal mediator of neural maturation. Although mental imagery does not elicit gross motor movements, there is a slight firing or stimulation of the neural pathways which are actually involved in the sport performance being rehearsed. Therefore, imagery appears to enhance performance patterns and eventually may lead to a more automatized, flowing performance (Orlick, 1980). This has important significance for young athletes or athletes learning a new skill. They may have some difficulty using imagery as a form of skill rehearsal because they may have not yet used the specific neural pathway required. With neural maturity there may also be a maturity of imagery skills.

On the other hand, Feltz and Landers' (1983) found no direct evidence to support this low-gain neuromuscular activity claim. Instead, they assert that rather than the specific muscle activity patterns associated with the imagined skill, imagery appears to elicit general muscle innervation. Feltz and Landers' (1983, p.48) contended: "it is doubtful that mental practice effects are produced by low-gain innervation of muscles that will be used during actual performance".

Housner (1984) found imagery ability to be an important factor. Individuals with high imagery ability were able to reproduce the movement stimuli with greater accuracy than those with low imagery ability. Three aspects of imagery ability (i.e., modality, vividness, and autonomy were investigated by Start and Richardson (1964). Imagery vividness did not appear to be a critical factor in efficiency of

imagery of physical skills: "As a single variable, the controllability of imagery, appears to be more significant, but it is the interaction of these two facets of imagery which promises to be most informative" (1964, p. 283). The authors further suggested that individuals may tend to utilize one particular modality more than another.

A number of scholars were able to confirm the results that controllability of imagery is related to better performance (Corbin, 1972; Meyers, Cooke, Cullen, & Liles, 1979; Switras 1978; and Gray, Haring and Banks 1984). In constrast, Mahoney & Avener (1977) failed to find any relationship. Ryan and Simmons (1981, 1983) found neither vividness or controllability to be significant factors in performance. What Ryan and Simmons (1981) found was the influence of relative frequency of imagery compared to physical practise had great variability. The results indicated those subjects who completed fewer trials often performed better. The authors suggested this occurred because subjects who completed fewer trials often appeared to be attending to a larger number of elements essential to the task and concentration appeared to be better for those who were attending to more task cues. Ryan and Simmons (1981) concluded that the quality and extent of mental rehearsal appears to be quite important.

Orientation is another parameter of imagery which has received increased attention. Basically, two distinctions have been made regarding the perspectives of imagery, internal and external. Internal imagery involves experiencing the image from the performers' perspective. External imagery refers to imagery where the performer views the image from the perspective of an external observer. Mahoney and Avener (1977) found more successful gymnasts utilized predominantly

internal imagery. The same was true for elite rifle shooters (Suinn, 1983). Contrary to these findings Epstein (1980) found no significant differences in performance of a dart throwing task by subjects under internal or external imagery instructions.

The actual time period invested in imagery ranged from a few seconds (i.e., determined by the individuals and how long they took to complete their imagery), to 15 seconds (Caudill and Weinburg, 1983) and to 30 minutes (Vandell, 1943). Some of the research evidence suggests that between three (Schick, 1970) to five (Twining, 1949) minutes is the longest time period in which concentration can be maintained without a rest. Although Caudill and Weinbury (1983) found no significant differences or effects of 'psych-up' conditions, they suggested performance changes may have occurred if other psych-up durations were used. Furthermore, they believed that future investigations would have to consider the complex social milieu and individual differences that could potentially affect performance. Oxendine (1969) found excessive mental rehearsal to cause athletes to become impatient with the technique.

Also of varied implementation was the number of trials per practise session and the total number of trials. There was quite a variation in the overall length of the imagery programs as well. The literature indicated that the imagery practise sessions ranged from one day to several weeks. This could contribute to some of the inconsistent results.

There appears to be an amount of time of using imagery that is most effective for improving performance. While it is important for coaches and athletes to be aware of this possible optimal length of imagery

practises, other factors such as the nature of the task, the nature of the individual, and the number of imagery sessions may also be considered.

Imagery can be used to foster the healing process of an injury or sickness (Archterberg & Lawlis, 1980; Ellis, 1985; Nelson, 1984; and Unestahl, 1983 & 1985). This can occur through instilling behaviors and attitudes favourable to recovery and rehabilitation. Through imagery athletes can participate in their own recovery by taking control of bodily processes which influence healing. Such factors as constriction and dilation of blood vessels, distribution of blood, heart rate, body temperature, muscular relaxation and many other bodily functions affect healing and can be influenced by the use of imagery (Evans, 1984).

Imagery can also be used to generate positive and more productive attitudes toward recovery and rehabilitation from athletic injury (Unestahl, 1983 & 1985; and Gordon, 1986). Imagery can help the athlete maintain motivation, control their imagination, and to reduce anxiety and fear. Different types of imagery that can be used with injured athletes include emotive imagery (Lazarus, 1977), body rehearsal (Gordon, 1986), mastery rehearsal (Mahoney, 1977; Achterberg & Lawlis, 1980), coping rehearsal (Lazarus, 1977; Gordon, 1986), and time projection (Lazarus, 1977). It is useful both for the improvement of disorders associated with responses to injury and for enhancement of rehabilitation performance (Gordon, 1986).

Some specific ways in which imagery can be used in sport are through modeling, role-playing, creativity, memory, communication, and self-confidence. These methods of incorporating imagery and the

imagery process are governed by the necessary conditions for imagery emergence and contribute to the development of cognitive, affective, and social contributions in development. Some of the factors which can be influenced by imagery include attention and concentration, memory, discriminating cues, originality, consistency, role-playing, communication, alternate behavior patterns, empathy, and confidence (Suinn, 1983; Mahoney, 1983; Tower, 1983).

Modeling has a vital role in the use of imagery and sport. It would be a rarity to talk to a young athlete and find out that they do not have a special role model whose play they would like to emulate. Sometimes, it can be an older brother or sister or the high school quarterback or maybe a superstar like Wayne Gretzky. From watching a role model perform certain images develop which can be rehearsed as an athlete tries to imitate the desired skill. Important points can be learned about how to perform the skill and, furthermore, there tends to be a strong motivating factor.

Individuals can role-play by using imagery. This role-play can be of other individuals or of themselves while utilizing alternative ways of behavior, interpretation, and expression. Imagery provides athletes with the opportunity to confront, cope with, and overcome problems or events before they are confronted in the real world. Imagery acts as "a buffered kind of learning which can feel real (in your mind) and yet does not have the serious consequences of failure which sometimes occurs in the real world situations" (Orlick, 1980, p. 11). Further, the individual can feel "better prepared and more confident" (Orlick, 1980, p. 96). Having gone through the experience successfully in imagery can help an individual develop self-confidence. The athlete

knows she has the ability to cope with the situation. Imagery helps put self-control in the hands of the imager.

Role-playing also allows an athlete to step into the shoes of another person and get a sense of task from a different perspective. A more empathetic understanding may result which, in turn, can elicit respect for internal experiences of others as well as provide insight into one's own internal experiences. This awareness opens up alternative ways to behave in certain situations.

Mental imagery has been shown to enhance originality in thinking and creativity in general (Tower, 1983). Often, the most successful athletes are those who can come up with original moves or adapt techniques to suit their individual style best. Athletes experience new variations of skill execution and add to the possible alternative responses to a given situation through pre-planned visions, dreams, ideas, or spontaneous invention.

Imagery can be utilized as a strategy for encoding and enhancing memory. Imagery can help recognize particular situations as well as enhance the ability to respond to that situation. One effective means that athletes use to do this is to create an image of the whole scene, remember the parts of the scene, and in this way, process the information that is out of place or missing. The rest is automatically filled in because of previous knowledge. For example, players on a volleyball team - if an athlete is familiar with a formation it is easy for them to glance at a situation and see who is out of position or where there is extra space (Nideffer, 1976). Rehearsing different ways of dealing with these differences while in non-threatening situations enhance the likelihood of using alternatives and appropriate coping

styles in real situations.

Imagery can enhance communication. One way is through the development of empathetic understanding mentioned earlier. As well, describing the images one has, can help communicate meaning that could not be projected through verbalization. The speed at which sports events occurs make it impossible to use language to describe and relate what is happening at the rate it is happening. Imagery allows large amounts of information to be absorbed simultaneously and provides a holistic representation.

Self-confidence has been defined as a situationally specific trait whereby the individual believes that they can successfully execute a specific activity. Of strategies that can be used in an attempt to increase self-confidence, imagery is one (Feltz and Doyle, 1981).

An individualized approach to intervention procedures is valuable (Suinn, 1983; Newman, 1985; and Unestahl, 1985). There are too many individual differences and too many different experiences to treat everyone the same. It is important to respond to individual needs. What works out in the practise situation and actual competition will vary among individuals.

Taking an individualized approach allows individuals to meet their specific needs and more closely attain their personal potential. Each athlete can begin to address aspects concerning experience level, imaginal style, and individual personality. Alternative means for developing necessary attributes, skills, and attitudes can be explored. Ultimately, the goal is to assist the athlete in developing into an independent individual who is more effective with her mental skills.

After investigating the sport imagery literature, three streams of imagery application were revealed. One, acquisition, development, retention, and fine-tuning of motor skills, and specific physiological functions. With this kind of application imagery is used as a means of providing quasi-sensory experiences to athletes so that they may perfect highly skilled movements and enhance performance. Two, acquisition, development, retention, and fine-tuning of specific psychological skills. Here, the purpose of imagery is to generate the desired feeling states and focus of attention most conducive to optimal performance. Imagery can be seen as a form of stress management where imagery is be used as a technique for teaching athletes to deal with the related phenomena of tension, anxiety, stress, and arousal. Three, muscle re-education/rehabilitation and mind set is another area of imagery application. For these purposes imagery is a technique used as a means of restoring function after muscle injury and creating psychological ready state for re-immersion into training regimes.

The number of subjects varied greatly ranging from one (Titley, 1976) to as many as 72 per group in a study by Clark (1960). The methodological procedure or imagery utilization intervention also varied. As Singer (1972) points out, the methodology and specific mental strategy used for this research can be grouped into five basic categories: i) having a subject read a description of the task; ii) memorization of descriptions and thinking through them at regular intervals; iii) viewing a demonstration or film of the proper execution of a skill; iv) having the teacher read a description to the students; and v) having subjects imagine themselves correctly performing the skill. Some studies do not specify the actual mental practise used

but, generally, they refer to mental rehearsing or visualization (Oxendine, 1969).

Richardson (1967b) completed a review of the literature which looked at the methodological issues associated with effectiveness of mental practise. There were some seven areas where problems were most frequently encountered. These areas included: mental practise; uncontrolled practise; distraction; subject characteristics; task characteristics; motivation; and comparison groups.

In the sport literature, there are numerous components within imagery that have been identified as influencial factors on the effectiveness of imagery. These aspects are: nature of the task (Ryan and Simmons, 1981); ability to image-vividness and controllability (Clark, 1960; Start and Richardson, 1964); experience or skill level (Clark, 1960); ratio of mental practise to physical practise (Clark, 1960; Meyers, Schleser, and Okwumabua, 1982; Riley and Start, 1960; Twining, 1949; Titley, 1980; Suinn, 1983; Rouse, 1984; Kirschenbaum and Bale, 1980; Gray, Harvey, and Back, 1984). Other influential factors on the effectiveness of imagery are: modality experienced; experimentor bias-coaches' influence (Clark, 1960); introspection (Clark, 1960; Twining, 1949; Start and Richardson, 1964); intelligence; length of time (Twining, 1949; Caudill and Weinburg, 1983; Weinburg, 1982); perspective which imagery is experienced from, either internal or external (Suinn, 1983; Mahoney and Avener, 1977); other individual characteristics (Richardson, 1967a, 1967b; Clark, 1960; Mahoney and Avener, 1977); and relaxation (Baudin, 1984; Suinn, 1976).

Value of Mental Imagery Training in Sport Performance

Mental imagery has been used by many athletes and coaches in an

attempt to improve both the physical performance and psychological functioning. The potential values of imagery can be summarized into eight aspects. Firstly, imagery influenced response patterns. This occurred through the strengthening of correct responses, elimination of incorrect responses, and increased transfer from practise to game conditions (Suinn, 1983; Orlick, 1986c). The use of imagery also served to bring about gains in motor performance, (Suinn, 1983). A combination of mental training and physical practise seemed to be best for improving performance (Baudin, 1984). Imagery provided experiences of success, motivation, familiarization, refocusing, and psychological preparedness (Orlick, 1986b). Building confidence was another value of imagery (Feltz and Doyle 1981; and Mahoney and Avener, 1977).

Fourthly, improving concentration, heightening the enjoyment of sport, restoring energy, removing psychological blocks, and improving relationships with teammates and coaches can be achieved through the use of imagery (Nelson, 1984). When there is limited practise time available that simulates actual competition, as is the case with international level competition in many sports, imagery could help rehearse under simulated circumstances. Imagery is a valuable form of practise (Orlick, 1980). In situations where potential overtraining may occur imagery can help maintain rehearsal without further physically fatiguing the athlete and increasing chances of injury. Athletes who are recovering from an injury find imagery valuable (Orlick, 1980: & Unestahl, 1983), as it potentially expediates the healing process (Nelson, 1984). Further, every athlete has the potential to use imagery and to improve upon the skill with practise (Orlick, 1980; Sheikh, 1983). Finally, imagery can be a holistic

representation of an experience (Harris, 1984).

There are at least five variables that affect imagery practise, thereby influencing the potential value of the experience for the individual. One such variable was a person's experience with the task. Orlick (1980) and Suinn (1983) suggest experience will affect how much an athlete profits, and that the experienced athlete will profit more than the inexperienced or novice athlete. Task complexity had influence over the effectiveness of imagery. Simple tasks were more easily mastered through imagery than complex tasks (Nideffer, 1976; Orlick, 1980; & Suinn, 1983). A third variable contributing to the value of imagery sessions was the spacing of practise. Baudin (1984) and Suinn(1983) found distributing rather than massing imagery sessions increases their value. As well, the use of props sometimes helped individuals who were having trouble calling up images (Orlick, 1980). For example, the athlete was asked to look at back of her hand, close the eyes, and describe as vividly as possible her hand. Finally, the procedure and environment that imagery rehearsal was carried out in affected effectiveness.

So far the research findings regarding imagery have had optimistic outcomes. It was this author's belief, and appeared to be a general agreement among researchers, that mental imagery positively influenced performance in sport. However, when interpreting these results, caution was prescribed for several reasons. For instance, research to date had been conducted through diverse methodologies, a wide range of task demands, and some measures had been of skill acquisition while others on skill performance. As well, there was inconsistency in effectiveness. While some athletes were able to use imagery very

effectively, others were not, and in some cases, it was in fact detrimental to performance. Nideffer (1976b) suggests the ineffective use was due to inappropriate application of the process versus the procedures themselves. Another concern was the realization that imagery was potentially not fully responsible for improvements, that is, other factors may have affected change. For example, the athlete may have engaged in other training, such as a new weight training program, a change in technique, cumulative learning experiences might have occured during the same year the imagery was tried, or it may have been a placebo effect because the athlete believed there should have been change. One must consider performances that were below par or the expected level of performance, even though imagery rehearsal was being used (Suinn, 1983).

Further, some reports utilized skills not necessarily directly related to dynamic sport activities. For example dart throwing and rotary skills. Consequently, the evidence was not of imagery effectiveness but rather a view of potential areas of application. Most studies focused on findings that dealt with an individual separated from the team or group dynamic situations. Additionally, little or no attention focussed on helping the coach learn about how to incorporate psychological skills training into an overall program, on the application of imagery skills to actual sport performance, on the potential outside stressors affecting performance (i.e., school studies, social activities, and domestic responsibilities), or on the transferability of the learned imagery skill to the actual sport setting. Moreover, at times, the skills studied have been removed from the actual sport situation and do not resemble the natural execution

necessary for competition. "Unfortunately, theoretical work and research finding to guide sport participants in the effective and appropriate use of imagery is sparse" (Gills, 1986).

H. The Imagery Process

After investigating the literature concerned with imagery in sport, it becomes apparent that there are many potential factors influencing imagery and its process. In an attempt to provide some valuable guidelines for the establishment, implementation, utilization, and evaluation of an imagery training program, six main aspects appeared to be important for the successful application of imagery. The successful incorporation of imagery into competitive sport participation requires consideration of these six factors: the sport, the athlete, the purpose, the coach, the sport consultant, and the technique. Within each characteristic, there are a number of factors which are considered important for successful imagery programming.

The Sport

Imagery will not be equally beneficial to every sport. The requirements for every sport or event vary. Some dimensions which need to be taken into consideration are: "team vs individual, power vs finese and speed vs endurance,...precision, foresight, coordination, balance and esthetic beauty" (Sime, 1982, p.2). The demands of each sport will partially determine the emphasis of both the physiological and psychological training to be carried out which will influence the possible applicability of imagery intervention.

There are four areas in sport that provide opportunity for athletes to take control of their destiny. The pre-competitive plan allows for

a constructive focus to be maintained going into the event. The competitive focus plan keeps the focus on factors which the athlete has control over, that is, the athlete is connected to what they are doing. Competitive evaluations are important for the learning of lessons, it allows the athlete to adapt or refine mental approaches. Distraction controls are very individual and requires learning from both the elements which contribute to events going well and from those factors which contribute to events going poorly (Orlick, & Partington, 1986).

The Purpose

Clearly identified goals of desired outcome appear to be important to effective imagery training and to the imagery process (Unestahl, 1983; and Orlick, 1986a). If there is no specific purpose in mind, effort and intensity may be poorly directed and, consequently, inefficient progress toward the goal results. With an identified purpose, it is much easier to establish a comprehensive action plan that insures better direction of effort and energies to the desired outcome. Physical, mental, emotional, and social aspects each contribute and influence the purpose or goal trying to be attained. "Before beginning imagery work, you need to consider the purpose of the technique and outline of the general content. This information helps to enhance performance and enjoyment" (Hendricks, 1982, p. 24).

The Athlete

> Imagery needs to be tailored for each athlete. Not only do people differ in their response to various imaginary situations, but there are countless variations of body reactions as well. When a person is confronted by images, statements, and imaginary situations, that individual is the only person in the world to 'see and feel' them that particular way." (Hendricks, 1982, p. 25).

Each and every individual is unique and brings with her to every sporting situation qualitiies that are truly her own (i.e., intelligence, experience, personality). However, researchers (Orlick & Partington, 1986) have been able to identify some common qualities that all great competitors appear to share. These characteristics are displayed in the person's total and dedicated 'commitment' to their dreams and goals. They approach the tasks that lie before them with 'intensity' and the 'best effort' they can give. To get the most out of their efforts, training sessions are structured to 'simulate' the real game situation as much as possible. Both the athlete's execution and attitude are 'precise'. By using imagery, athletes seek to explore beyond the physical side of their development and cash in on the benefits of mental training. Through establishing 'clear daily goals', the world's best competitors can continually evaluate their progress and put action plans into operation that are most beneficial to their pursuit of sporting excellence. Furthermore, the small day to day achievements help maintain motivation.

There are idiosyncrasies existing between athletes regarding their possession and utilization of the qualities characteristic of great athletes. As well, individual personality traits are important to recognize and consider because the individual needs of each competitor are affected by these. The individuality factors influence the development of proficient use of imagery. Imagery will not be as equally beneficial to all athletes (Suinn, 1983). According to Singer (1977a), individual difference considerations include the fact that not all athletes learn at the same rate. Second, all athletes do not respond to the same instructional approach in the same way. Third, the

greater the ideal presence of personal attributes associated with achievements in a particular sport, the greater the potential will be realized. Fourth, personal limitations can be compensated for. For example, hustle can overcome certain deficits in size or skill. Fifth, athletes have different motives, values, and interests. Sixth, athletes come from different types of families and have various types of influences and pressures. Seventh, athletes have different experiences and dissimilar potential for athletic success. Further, athletes mature at different rates, thus producing a dissimilar potential for learning and performance. Finally, belief is an important aspect of developing imagery. For change or development to occur effectively the athlete must believe in the potential benefits. The strength of their belief will be reflected in the intensity of the action it initiates, (Silva, 1982b).

The Coach

The coach plays an important role in utilizing imagery. Generally, the coach is responsible for structuring the sport setting. It is important that clear guidelines and rules for acceptable behavior are provided. To help foster imagery utilization in the overall program, it is valuable for the coach to have some knowledge and understanding for the imagery process, each individual athlete, and the sport. Only then can she assist with the implementation, prescription, and transfer of imagery skills to the competitive sport situation. Furthermore, "the belief factor is a powerful element in success or failure and the athlete will quickly pick up non-verbal cues (e.g., from the disbelieving coach) that influence his or her motivation and cooperation" (Sime, 1982, p.2).

The type of coaching style employed reflects to some degree the extent to which individual team members will utilize imagery (Clark, 1960, and Martens, 1986). In situations of autocratic leadership where the experience is very directed, there is little opportunity for development of inner resources or experimentation of possible alternatives. On the other hand, a laissez-faire leadership has no goal dependency and instead of no choices to focus on, there are too many things on which to focus. The ideal situation is one between laissez-faire and authoritarian rule where leadership style moves along a continuum so as to utilize styles appropriate to a given situation or moment. This allows for the development of inner resources and offers some goal dependence.

A coach attempts to increase certain desired behaviors and decrease undesirable behaviours in an athlete. Smoll, Smith, and Curtis (1977) suggest that there are two approaches to influencing people: the positive approach or the negative approach. In using the positive approach, desirable behaviors are strengthened by motivating people to perform in desirable ways. The negative approach involves attempts to eliminate negative behaviors through punishment and criticism. For each method the motivating factors are different and in turn may influence the imagery process differently (Clark, 1960; Martens, 1986; and Tower, 1983).

The Sport Consultant

Imagery in sport is in its infancy so there are relatively few trained instructors who know the requirements of the athletes, the nature and demands of particular sports, and the potential and limitations of imagery. Limited funding, lack of awareness by coaches

and administrators for sport consultant services, and the time commitment required to provide continuity and consistency for team members also work to influence the availability of sport consultants to work directly with athletes:

> Two levels of development are in progress within a team: the superficial or practical level with its emphasis on technical execution, ball control, and fitness and the concealed, yet all powerful, deeper level of feelings and emotions. It is one's feelings and emotions that provide the force and energy that directs their behavior. (Kauss, 1980, p.).

The sport consultant's role goes beyond the technicalities of the game and the formal social system of a team to address the feelings and emotions that each player brings to the sport situation. Sport consultants share procedures and methods that help the participants investigate, develop, and refine the necessary skills for sporting excellence. They acknowledge the individual's feelings and recognize that these feelings influence the game and the team in powerful ways.

> A player has feelings and a squad, as an entity, has feelings. The two are not necessarily the same, yet the inter-action is so strong, that the feelings of the player influence the squad and vice-versa". (Weir, 1977, p. 10).

These feelings are a potential source of positive power for both the individual and the team. Sport consultants go beyond the technicalities of the game and the formal social system of a team and address the feelings and emotions that each player brings to the sport situation. The sport consultant tries to find ways to transmit this power to the practical area so their impact is not lost.

As Waitley (1983, p. 198) comments, perhaps a main concern of sport psychologists should be directed toward attempting "to develop a more complete, elite athlete tommorrow, one who also functions as a healthy individual among his or her peers and outside of the sports pavilion"

(p. 90). This means ensuring the individual member is in good mental and emotional conditions so maximum potential might be reached. The sport consultant strives to find ways to help the athlete learn to control any negative experiences and change them into positive ones. The sport consultant can guide athletes to:

> continuously extend the limits of the ... experience. The limitations of her body can be expanded as she becomes, fitter; the limitations of her interactions with others can be broadened by her increased insight through the group; the limitations of herself can be widened as she experiences new situations and becomes more aware of her own response to them. The point is never reached when a player has learnt all there is to learn, or experienced all there is to experience. (Weir, 1977, p. 23).

Singer (1984) generated the following list which outlined the possible ways that sport psychology and sport psychologists can contribute to sport:

1. Scientist - developing the body of knowledge.
2. Scholar - developing/transmitting the body of knowledge.
3. Intermediary - between coaches and athletes.
4. Psychodiagnostician - of athletic potential
5. Analyst - of practise/training conditions.
6. Optimizer - of performance potential.
7. Counselor - for conflict management.
8. Consultant - for program conduct.
9. Spokesperson - for the welfare of athletes.

To carry out the job of the sport consultant effectively and efficiently requires identification of the key factors or determinants influencing intervention. Halliwell (1987) outlines four variables that are important considerations for effective sport consulting intervention. These variables are: client, consultant, situation, and techniques.

Among client variables are belief, past experience, and motivation. Consultant variables suggest the consultant is fit and rested, committed and available, and understanding of the sport. It is

also important for the consultant to have good social and interpersonal skills, as well as be perceptive and read situations very well. Of particular importance are communication skills. The consultant needs to understand the athlete's complex social environment and way of thinking. Attempts should be made to use the athlete's experiences.

When addressing situational variables, it is important that the consultant's role is well defined: "the who, when, where, and why of the sport psychologist's involvement are clear" (Halliwell, 1987), and the coach supports and is involved in the mental training program. The sport psychologist may need to work with the coach more than the players. As well, the mental training program should not be imposed on the participants.

Techniques that consultants can use are numerous, and choosing the best and/or most appropriate ones will largely rest upon careful consideration of the interrelationship between client, consultant, and situational variables. A few examples of psychological techniques currently receiving a lot of attention in sport situations are: breathing techniques, relaxation, goal setting, affirmations, and imagery.

Halliwell (1987) provides additional guidelines for introducing and maintaining mental training programs. These guidelines suggest that the team sport consultant spend a lot of time with the team and individual team members. It is only in this way that she can get to know the athletes, the coach, the sport, and the program in both obvious and subtle ways. This approach requires much time and effort which demonstrates a show of commmitment and caring for the team members and the program. Through this type of relationship, valuable

knowledge and insight will emerge and assist in further developing effective imagery process programming.

The Technique

Imagery is a complex phenomenon and can be utilized in many ways. Therefore, it is necessary to identify the potential imagery techniques that can be used for the desired purpose. The more the applied technique is specific to the problem or skill to be learned, the greater the potential effects will be. One technique will not satisfy all requirements. For example, 'instant preplay' may be appropriate for momentary mind clearing but not as effective as basic performance practise for inducing deep relaxation.

The characteristics that the literature seem to indicate as being most important to insuring an effective and efficient implementation and utilization of the imagery process are practise, relaxation, total sensory modality experience, length of time of both the overall program and the individual imagery sessions, and perspective.

Just as the learning and development of physical skills take time and practise, so it is true with imagery. To utilize imagery effectively requires practise, time, and effort (Orlick, 1980). When first attempting to use mental imagery to improve skill development or some aspect of the sport situation it is best to start with very simple, familiar scenes and progress gradually to more complex images (Orlick, 1980; Krenz, 1984; & Mahoney, 1979). As well, it is most effective to practise in a fairly low stress environment, free from distractions or interference from other people. For example, an athlete might start with non sport situations, then, progressively practise the skills and techniques in more demanding performance

situations, and gradually, bring the practised skills to the competitive environment (Canadian Womens Field Hockey Association, 1985).

There are a number of practise or learning strategies that should be taken into consideration. Perhaps the most popular method of teaching sport skills to athletes is the whole-part-whole method. As a general rule, simple activities are taught using the 'whole ' method and more difficult activities are taught using the 'part' --> 'whole' method (Singer, 1977a). Given that sport tends to be dynamic action, the body movements occur at the same time and the gradual whole-part-whole progression allows the athlete to progressively develop greater levels of cognitive organization. Furthermore, the more the athlete practises, the better they get (Evans, 1984). Some athletes will be more reactive to one technique than others. If more techniques are available (e.g., instant preplay, instant replay, performance review, etc.,), the greater the potential for developing ways for dealing with situations and circumstances and creating the most beneficial results for a particular individual.

Relaxation seems to be an important pre-cursor to effective imagery. If at all levels (i.e., physical, emotional, mental) an individual is able to relax, autonomic responses remain quiet and a global feeling of well-being ensues (Green, 1987). Relaxation is helpful because it does not eliminate anxiety, it focuses it and brings it under the control of the individual (Mcwhirter, 1983). Relaxed people seem to be more susceptible to the images being practised (Evans, 1984). When utilizing relaxation into imagery programs it should be progressive and supplementary (Tomayko, 1980). When deep

muscular relaxation is appropriate such as preparing to sleep or after competition, Suinn (1976) claims that the quality of mental imagery that can be generated is better, thus increasing the effectiveness of mental practise.

Regarding time, two considerations seem important. First, the length of the overall imagery program is important. It appears that some form of recurrent contact by the sport consultant is required to foster learning, commitment, and continuity. Enough time should be available to develop independence and self-control within the athlete so that, as the sport consultant leaves the team situation, the athlete is able to maintain and improve upon her imagery or psychological development (King, 1987). Imagery can then be presented as a skill that has value in the competitive sport environment and for everyday functions, thereby adding to the quality of life in general:

> Mental training that can teach stress management skills, a good self-esteem, and a positive attitude to life can have influence far beyond physical performance. The physical conditioning while mental training can create a mental conditioning which lasts for life. (Unestahl, 1983, p. 24).

Secondly, length of time during which an imagery technique is utilized is important. If deep relaxation is the desired feeling perhaps longer lengths of time spent imaging are appropriate and effective. If the desired outcome is creating the appropriate focus and feeling state while in the heat of the game, then the image may require only seconds to complete. This author suggests that the sport consultant provide athletes with imagery sessions of varied length and desired outcome. This will allow the athletes to acquire a 'feel' for the length of time needed to create the best results for them given the desired outcome.

Imagery has been defined as a holistic experience. Imagery can consist of the re-experiencing of an experience over again or it can consist of a totally new experience created through imagination. Regardless of its context or content, the more senses that are used in the image, the more information that can become aware to the athlete. Athletes may find they have one, or two, or some combination of sensory modalities that they tend to utilize more in their use of imagery. Sport consultants should encourage them to continue to develop their sensory strengths as well as attempting to become more aware of their experience in the other sensory modalities.

Although the results have been inconsistent regarding the 'best perspective' from which an athlete should conduct her imagery. The trend of all top level international competitors who have become world or Olympic champions is the use of internal perspective imagery (Orlick, 1989). It is this author's contention that when sport consultants work with athletes, they encourage athletes to develop abilities to utilize both perspectives with the emphasis on internal point of view. In this way, the athletes have the flexibility to use both perspectives and can experiment with which viewpoint is most appropriate in what situations. For example, the athlete may find that in situations where her focus is primarily concerned with the sequence of an action, the external perspective is most appropriate, while concern for highly controlled movements the internal perspective may be used (Chevalier, 1988).

I. Future Directions

The images involved in everyday transactions are numerous. This

becomes evident in the notions held by people regarding buying, selling, competing, and performing. For all experiences, there is a potential for its representation to occur as some form of imagery. Imagery rehearsal allows people to learn in many different ways and to assimilate these experiences. Through this assimiation process, they are able to develop a repertoire of skills which can be used to deal with everyday occurrances. The experiencing of imagery can come about through all or any combination of the sensory modalities to serve as an alternate mode of encoding and communicating. Imagery facilitates understanding and exploration of reality in a non-threatening situation where the outcome is related to the individual's ability to control that outcome.

There is a need for continued research investigating the application of imagery in sport. Based on this literature review four potential areas for future consideration were identified. First, there is a need for the formalization of imagery into clearly identified and defined techniques. Second, further exploration into systematic utilization of imagery techniques in athletic training programs is warranted. Third, investigation into systematic monitoring of participants' utilization of imagery techniques in competitive sport preparation could produce informative results. Finally, more knowledge is needed regarding the effective transferability of laboratory or classroom learned skills to the practise and competitive situation.

III METHODS AND PROCEDURES

A. Introduction

The intention of this study was to describe and analyze the implementation, utilization, and effectiveness of an imagery training program on the participants of the women's volleyball team at the University of Alberta. To achieve this end, the researcher, attempted to become aware of the needs of the participants relative to the imagery process, the attributes required of them by the sporting environment, how these attributes could be fostered by the imagery process, the potential methods and procedures that could be used to develop these attributes, and the conditions affecting this development.

To provide insight on the particular methods and procedures followed to obtain the desired information, this chapter was broken down into twelve sub-sections. These sub-sections were entitled 'Overview of the Study', 'Sample', 'Operational Definitions', 'Treatment Program', 'Experimental Design ', 'Data Collection: Instrumentation', 'Data Collection: Procedures', 'Data Analysis', 'Delimitations', and 'Limitations'.

B. Overview of the Study

This study was a field experiment for the duration of seven weeks during the university league season within the volleyball team context. After developing an imagery training program and establishing an implementation plan, the researcher intended to test these in an acutal sport setting. The implementation plan required a long-term,

intense work with a cooperating coach and sport team. The volleyball coach was eager to incorporate the program offered by the researcher. Due to time requirements, scheduling, knowledge of sport, and an understanding of the imagery program, the researcher assumed the role of sport team consultant. Throughout the study, the sport consultant had definite role responsibilities. The coach and sport consultant verbally contracted that imagery training services would be provided for the remainder of the season leading up until Christmas break. During the five weeks before the sport consultant joined the team, the coach did some goal setting and team building. As well the coach used this time to start establishing a 'program personality'.

When the researcher had her initial contact with the players, she was introduced as the team sport consultant. It was at this point that the imagery training program was commenced. Initially the sport consultant spent time becoming familiar with the players and the volleyball program. Then her focus was directed to presenting, monitoring, and evaluating the imagery program.

For the duration of the season, varying degrees of participant-observer characteristics were used (Bruyn, 1966). At those times, when the sport consultant was not actively involved implementing the imagery program or assisting the coach in a practise situation (eg. shagging balls), she became an observer-participant gathering ethnographical information. Through this ethnographical account, the true-to-life and intermingling aspects of day-to-day activity in the sport situation was given much flavor, richness, and meaning, relative to the overall socio-psychological existence and development of the players.

Consideration was given to various roles that were assumed by the team sport consultant, methods of helping intervention, monitoring of the results, the effectiveness with which she carried out these tasks, and the implications of her experience for the training of sport consultants.

Shortly before commencement of the Christmas break, the coach and the consultant met to discuss the contract. Both parties felt that for reasons of continuity, commitment, and team cohesion the team sport consultant should remain with the team. The consultant stayed on with the team but the role was slightly modified. The classroom sessions were discontinued, as per contracted, while sport consultant involvement during practise and competitive situations was continued with slightly reduced time commitment (i.e., instead of attending all practises, two to four practises a week were attended). The sport consultant continued to help athletes transfer the skills learned in the classroom to the gymnasium. As well, she provided instructional, counselor, and intermediary services as they were requested or required.

C. Sample

This present study was concerned with individual differences existing among participants of a women's volleyball team. The team was preparing to compete for the University of Alberta Volleyball Program in the Canadian Western Universities Athletic Association (CWUAA) for the 1986 and 1987 season. The team consisted of 12 female players with varying degrees of university volleyball experience. The volleyball

team members were chosen on the basis of accessibility and coach cooperation (i.e., willingness of coach to be involved). Subject selection was not random. Participants were aware that they had a choice to participate or not to participate and if at anytime during the program they opted to discontinue their involvement they were free to do so without any need for explanation for their decision. All 12 players agreed to take part in the study and no drop-outs occurred. Subjects ranged in ages from 17 - 21 years old. All members were enrolled as fulltime academic students at the university. The team was comparable to that of other women university volleyball teams in Canada and consequently, could be considered a representative sample of these teams. The coaching staff consisted of one head coach, one assistant coach, one physiotherapist, and one sport consultant. The support staff were not part of the sample group, although their involvement had influence on the players.

D. Operational Definitions

Imagery: The categorization of imagery into thirteen techniques, each of which can be used to guide and direct images to influence mental, emotional, and physical functioning in an attempt to create desired experiences for an individual. These categories of imagery techniques are individually identified and described in Appendix A. Regardless of the imagery technique being employed, the experience may be created in the absence of those situations and conditions that are known to produce the genuine sensory or perceptual experience in real life. Each imagery technique provides the athlete with the opportunity to create a total sensory experience, that is, to experience sight, sound, taste, touch, smell, kinesthetic, and someothetic sensations.

Imagery Checklist: A checklist devised to monitor the participants utilization of imagery throughout their daily activities (Appendix A). An explanation of the Mental Imagery Checklist abbreviations are also presented in Appendix A.

Script: The descriptive exercises that serve to guide participants through an imagery technique. These exercises were administered during the scheduled classroom sessions. A written form was also

handed out to the athletes for their reference at a later time (Appendix B).

Script Checklist: A checklist devised and used to monitor participants perceived experiences after they had gone through a particular script (Appendix B).

Optimal Performance State (OPS): This is an ideal feeling climate that consists of 10 feeling categories which allow an athlete to perform most effectively. Each of these categories are identified and described in Appendix C. An individual's ability to control the generation of her optimal performance state (OPS) was measured by the OPS Inventory, which is also presented in Appendix C.

Mood Sheet: An inventory used to monitor the players moods upon entering practise, any changes that may have occured throughout practise, and a final rating of mood accompanying the end of practise (Orlick, 1976) (Appendix D).

E. Treatment Program

The imagery program used in this study was based on the breakdown of imagery into thirteen separate mental techniques, (refer to Appendix A). These techniques were specifically discussed by Syer and Connolly (1984). The intent was to have each athlete experience the various imagery techniques and identify specific factors which were influencing the effectiveness of the technique(s). To accommodate the unique procedures used when utilizing the techniques, different scripts had to be developed. The scripts (refer to Appendix B) for each technique were developed based on the steps outlined by Garfield (1984) for directing mental images:

1) Choose the cast (i.e. imagery technique to be utilized).

2) Prepare the cast (i.e. from what perspective - internal, external, or both).

3) Choose the location (i.e. what exactly is to be addressed... arm action, mental factor, etc.).

4) Make the movie (i.e. run through the image).

5) Rehearse the movies. This involves a) practising imagery in a

controlled environment, b) then attempting an execution in the practise setting, and c) trying to progress from the practise situation to a competitive one.

Some of the example scripts from Gauron (1984), Syer & Connolly (1984), Hendricks (1975), Pulos (1982), and Peper & Williams (1981) served as a base from which adaptations were done. As well, the researcher created some scripts based on situations, words, images, and ideas suggested by the coach and players.

The treatment program, imagery training, was to occur twice a week in a classroom setting. During this time, athletes were guided through specific imagery technique scripts. Their experiences were evaluated according to a script evaluation form, as well as through discussion at the end of the session. Throughout the final three weeks of the program, designated practise time was also used to explore the utilization of specific imagery techniques. For specific presentation order and monitoring time refer to the treatment and classroom schedule (p. 75).

F. Experimental Design

Conventional research methods conducted in laboratories offer the benefits of internal validity through strict control and defined processes. However, they lack realism and external validity experienced in the natural setting. Natural setting research merits further utilization in the study of intervention programs in athletic endeavors. To date, group design has been a popular approach for examining the effect of intervention programs on athletic performance. Traditionally, much experimentation focused upon groups of individuals where conclusions pertained to variables based upon group differences

and the average was the issue of concern.

To obtain the information for this study, which would allow the researcher to thoroughly understand each member's uniqueness and draw from it in the most profitable way, single subject design with simple time-series data was used along with a participant-observer case study format. This type of research allowed the researcher to consider the importance of individual differences among participants with consideration of external variables which influence the individual (i.e., other teammates, school, social aspects). A developing body of clinical research, (Zaichkowsky, 1982; and Marks, 1977) indicates that each person has her own individual perceptions, her own individual pattern(s) of coping with the situations and circumstances she finds herself faced with. Therefore, individual consideration must be given to these differences, inorder to individualize psychological training programs (Martens, 1986). In this way individuality of group members is not lost. Knowledge of the individual will be most fully understood by considering not only general laws and variables such as interpersonal relationships and the larger social interactions, but also the individual variables (Kazdin, 1980).

C. Data Collection - Instrumentation

Survey of Mental Imagery - SMI

The SMI "is a questionnaire designed to determine the type of mental images that you are able to produce and manipulate" (Switras, 1975). This survey simultaneously measures vividness and controllability in seven sensory modalities (i.e., visual, auditory, olfactory, gustatory, tactile, someothetic, and kinesthetic). The

benefits of the SMI compared to previous devices (e.g., Betts, 1909; Gordon, 1949) are high Alpha reliabilities indicating that the subtests have very high levels of internal consistency; and some of the subtests deal with imaging in sensory modalities for which no assessment device had previously been created. For further reliability and test measures refer to Switras (1979).

In this study, the intervention tool was imagery. An important step toward the understanding of imaging behavior requires an accurate assessment of mental imagery. For the purposes of this study, the SMI was a tool used to provide an objective imagery assessment of the athletes involved. SMI is a tool that could provide "a quantified picture of the patient's (*athlete's*) imaging ability" (Switras, 1979, p. 3). From this information, imagery techniques used by athletes could be tailored to their unique imaging capacity. The SMI scales potentially provide the possibility of researching a broad range of individual difference variables.

Test of Attentional and Interpersonal Style - TAIS

The TAIS is a questionnaire designed to determine the type of attentional and interpersonal style an individual has. The results of the TAIS Questionnaire were graphed to produce TAIS Profile. The purpose of this analysis was twofold. First, this analysis was used to interpret the TAIS scores as they related to attentional scales, (i.e., habitual or customary manner in attending to things, events, or people; and strengths and/or weaknesses of an attentional style for specific sport siutations). Secondly, the analysis was to interpret scores related to interpersonal scales. This included indentification of her general style of interacting with other people (particularly her

teammates, coaches, opponents and officials) and how this style will both help or hinder her athletic performance during competition, training, and practise. The TAIS helped identify the specfic interpersonal situations which might be stressing or arousing for her and which might affect her performance in a negative way.

Even though the responses to the test questions were structured as objectively as possible, this interpretation was mainly an intuitive or subjective appraisal of the scores. Because of this, feedback from the athlete, through discussion, was imperative in order for any specific recommendations to be made regarding how it was possible to improve athlete performance. For more information regarding specific subscale reliability and validy measures, the reader is refereed to Nideffer (1976b).

Self-reports

Kazdin (1980) provides several suggestions as to the value of self-reports in research. He states that self-reports are valuable because they can provide information about factors outside the bounds of the researcher's eye (i.e., what is happening in the subjects' lives outside of the sporting environment such as school, social, etc.) but, which are influencing the player's volleyball activities.

For this study, a variety of self-report typologies were used. The specific self-reports used in this study were Background Questionnaire; Goal Sheet; Mental Imagery Checklist; Mood Sheet; Script Evaluation; Optimal Performance State (OPS) Inventory; Competitive Reflections (Appendix H); Competitive Plan Worksheets (Appendix H); Year-end Evaluation (Appendix I), and Dear Diary (Appendix I). Included were questions of the Likert-type format, forced-choice such as true or

false, and open-ended questions.

A background questionnaire was developed by the researcher to obtain general information from the subjects. The specific aspects of interest were age, previous volleyball experience, and previous mental or psychological training experience. This was completed during the first week of the study and was reviewed by the researcher immediately.

The coach had the players complete a goal setting sheet at the beginning of the season. The responses to this was made available to the sport consultant. The goal sheets were reviewed during the first week of the study. Occasionally throughout the study the sport consultant would refer back to these sheets. These forms provided further insights regarding specific school interests; volleyball interests in areas of technical, tactical, physical, mental, role, and personal performance; and personal interests such as family and a general 'others' category.

The Mental Imagery Checklist was constructed by the researcher to monitor the athlete's 'spontaneous' use of the various imagery techniques. The intent was that day-to-day (i.e., for school, practise, and domestic responsbilities) utilization of imagery techniques would be monitored. Thus, some indication would be provided to show what the athletes were doing, on their own initiative, with the imagery techniques that were being developed in structured class time. The Mental Imagery Checklist addressed seven factors which were identified in the literature as being important considerations to the imaging process (Richardson, 1969a, 1969b, 1983; Clark, 1960; Suinn, 1980; Singer, 1983; Gauron, 1984; Garfield, 1984; and Porter & Foster, 1984). These factors included time, viewpoint, sensory modality

experience, position, speed of image, purpose for using imagery, and effectiveness. Twice a week, during the classroom sessions, the Mental Imagery Checklist was administered.

Initially, 'substitution' and 'as-if' imagery techniques were intended to be among the imagery techniques presented to athletes. Although these two techniques were included in the description of imagery techniques defined and handed out to the athletes (Appendix C) they were not officially presented through an exploratory experiential exercise due to time constraints. The twelve techniques actually presented through exploratory exercises were: 'basic performance', 'ideal model', 'top performance', 'right time/right place', 'instant preplay', 'instant replay', 'performance review', 'relaxation', 'parking', 'energizing', 'cue image relaxation', and 'cue image energization'.

Twice a week for the first three weeks of imagery training the athletes were involved in structured imagery sessions where imagery scripts were presented to the athletes. The purpose of these scripts were to provide a relatively stress free environment, in which athletes were assisted in exploring various imagery techniques. The exercises were intended to foster awareness for the athletes to the important factors influencing the imagery process.

In order to gain insight into each individual's experience of being guided through the imagery scripts, the researcher developed a monitoring form referred to as Script Evaluation. The purpose of the Script Evaluation was to monitor the athlete's perceived experience of different imagery techniques. The questions addressed issues specific to the type of imagery technique being presented. Individual

tendencies and idiosyncrasies related to imagery experiences emerged. A similar form presented in Everly and Rosenfeld (1981) was used as a model for formatting the Script Evaluation. After each session the sport consultant reviewed the answers to identify concerns and tendencies for each athlete, which in turn would help provide a better understanding of a particular athlete and help with individualizing imagery training programs.

The Mood Scale was developed by Orlick (1980). The purpose of using the Mood Scale in this study was to monitor the participants' mood prior to, during, and after practise. As well, the 'comment' section of the scale attempted to discover what factors were influencing mood. Through identification of these factors, specific imagery techniques could be used in an attempt to regulate mood changes in the desired direction. This inventory was administered twice a week, during the classroom sessions and carried on throughout the study.

Highly associated with top level performance is "the existence of an ideal (optimal) performance state" (Loehr, 1983). Inorder to see if imagery training had any influence on the ideal or optimal performance state (OPS), each player was required to complete the OPS inventory after each league match. This inventory utilized ten of the feeling states and concepts that were repeatedly described as a common element of the OPS (Garfield, 1984; Loehr, 1983; Rushall, 1976; Rushall, 1978; Ravissa, 1977; Privette, 1981); Csikszentmihalyi, 1975; Maslow, 1967; Unestahl, 1983; and Smith, 1986). It was initially intended that this be recorded prior to the start of the game. However, the time between the end of warm-up and the start of the game was to rushed for the

players to complete the inventory without feeling pressure, so the OPS ratings were completed after completion of the match and retrospect of the games. This inventory was utilized throughout the study, for all scheduled league games.

The Competitive Reflections Inventory adapted from Orlick (1986) was used at the beginning of the fifth week of the study. It served as a starting point for athletes to begin establishing awareness of the patterns, behaviours, and psychological factors that were both fostering and hindering to competitive performance. The resulting information was used together with the newly learned imagery techniques to establish precompetitive and event focus plans.

Precompetitive plan, event focusing plan, and refocusing plan were identified as constructive exercises that help athletes to methodologically utilize psychological skills for competition (Orlick and Partington, 1986). These plans were used as guidelines for indicating when and how the subjects could use the imagery skills being presented in competitive preparation.

Two self-reports, 'Year-end Evaluation' and 'Dear Diary', were concerned with identifing how an athlete perceived her overall experience for the season. The Year-end Evaluation helped the sport consultant to clarify any perceptions she had regarding the athletes feelings or thoughts relative to the various aspects constituting the imagery program.

The Dear Diary report asked athletes to discuss, in their own words, general feelings concerning what a typical 'day-in-the-life' of a volleyball player constituted, what part volleyball played in the overall experience, what part academics played in the overall

experience and what part social activities played in the overall experience. Consideration to both the physical and the psychological factors influencing her experience were to be given. Athletes were asked to respond in as much detail as possible. The thoroughness of these reports varied quite a bit with some athletes providing answers in point form while others used paragraphs. This information was used to confirm or deny any of the conclusions the sport consultant had reached regarding a particular athlete's overall experience and involvement in the study.

Scheduled Interviews

Scheduled interviews were held during the first three weeks of implementing the imagery sessions. The purpose of these interviews were to discuss the researcher's intentions, the results from the TAIS and SMI, the implementation of the OPS forms, and the Mood Sheet. Any concerns the athlete had regarding particular forms or activities could be expressed and dealt with at this time. Other objectives of the interviews included buildung rapport, and providing time for athletes and sport consultant to get to know each other better. The structured interviews helped to assess the athletes' perspective, provide insight on factors outside the sport environment influencing the players, develop an individualized program for each player, and give players the opportunity to describe their experiences.

After this point in time, occasional scheduled interviews were set up by the sport consultant to follow up on the progress of the imagery program. However, the sport consultant was often faced with an unscheduled interview or counselling situation. These circumstances arose due to problems, conflicts, or concerns an athlete was

experiencing and wished to discuss. The information exchange at this time was usually very insightful and provided the sport consultant with awareness of the many powerful factors affecting the athlete's general functioning.

Participant Observation

Participant observation was among the number of avenues used to collect data for this study. Schwartz and Schwartz (1955, p. 344) define participant observation as "a process in which the observer's presence in a social situation is maintained for the purpose of scientific investigation". The observer is able to develop a more thorough understanding of those being studied because there is a sharing of common experiences: "It is through a process of symbolic interpretation of the 'experienced culture' that the observer works with his data and discovers meanings in them" (Bruyn, 1966, p. 12).

According to Bruyn (1966), the participant observer may assume four different kinds of roles, including complete participant, participant as observer, observer as participant, and complete observer. These four categories of participant observation roles are very much interrelated: "All researchers are all to some degree both observers and participants in all situations" (Bruyn, 1966, p. 16). For the purposes of this study, the researcher assumed a mixture of the roles outlined by Bruyn (1966). Ethnography was the approached used to obtain data from the participant observer roles.

Ethnography is one research technique that can be used to record data in such a way as to allow for the investigation of complex interacting variables that characterize the sporting context from the perspective of those actively taking part. Wolcott (1975) defines the

term as "the science of cultural description....'Culture' is the major concept and...ethnography is the descriptive account of what he (the observer) has observed and understood of another culture" (p. 112).

Despite scarce utilization of ethnographic accounts concerning sporting cultures, it appears to be a valuable technique for exploring those aspects which set the women's volleyball team apart as a unique group. There were numerous opportunities for the sport consultntn to sit back and observe the team as a unit. In this way new insights and understanding could be generated regarding the dynamics of the group and potential influences this dynamic might have on the imagery training program.

H. Data Collection - Procedures

The data collection procedures for this study can be divided into three phases. The first phase was an initial assessment and information gathering time for the team sport consultant. The second phase began with the initiation of the imagery training program. This was followed by the third phase or transfer phase, during which time the imagery skills were utilized in practise and in competitive circumstances.

The specific breakdown of the data collection procedures is presented in the following treatment schedule:

Phase I - Introduction and Information Gathering
Week 1 (October 20-26):
Monday - Introduction - discussion of researchers intent.
- Administration of the Background Questionnaire, TAIS, and SMI.
Wednesday - Imagery techniques defined.
- General imagery exercise and evaluation.
- Relaxation/parking exercise and evaluation.
Thursday - OPS explained.
Weekend - Over the weekend the team was involved in a

tournament where they played in four matches. OPS forms where filled out for every game the athlete played in, (OPS 4).

***Throughout the week the sport consultant observed the team members and used the time to get acquainted with the team and the volleyball program.

Phase II - Imagery Training - Classroom Sessions

Week 2 - Oct. 27- Nov. 2.

Monday - Explanation of Mental Imagery Checklist and Mood Sheet.
- Mental Imagery Checklist.
- Mood Sheet.
- Relaxation & Cue Relaxation and evaluation.

Wednesday - Mental Imagery Checklist.
- Mood Sheet.
- Basic Performance Imagery and evaluation.

**Throughout this week individual sessions were held to discuss the test and inventories presented and to give the consultant and the individual players an opportunity to get to know each other better.

Week 3 - Nov. 3-9

Monday - Mental Imagery Checklist.
- Mood Sheet.
- Performance Review and evaluation.

Wednesday - Mental Imagery Checklist.
- Mood Sheet.
- Ideal Performance and evaluation.
- Top Performance and evaluation.
- Right time/right place and evauation.

**Friday - Mental Imagery Checklist.
- Mood Sheet.

**Remembrance day would fall on Monday so Mental Imagery Checklist and Mood Sheet were completed on the previous Friday. (OPS 2).

Week 4 - Nov. 10-16.

Monday - Mental Imagery Checklist.
- Mood Sheet.
- Energizing and Cue Energizing and evaluation.

Wednesday - Mental Imagery Checklist.
- Mood Sheet.
- Preplay and evaluation.
- Replay and evaluation.

Weekend - OPS (2).

**Occasionally there was some carry over of these classroom sessions into practise situations. Circumstances arose at practise where the coach or sport consultant felt it would be beneficial to take advantage of the opportunity to show and/or provide experience for the utilization and implementation of the imagery skills being trained in the classroom. This spontaneous intervention was considered a 'coachable moment' and a critical aspect influencing the transfer of imagery skill execution from the calssroom to the gymnasium.

Phase III - Utilization of imagery techniques in practise and competition situations.

Week 5 - Nov. 17-23

Monday - Mental Imagery Checklist.
- Mood Sheet.
- Relaxation and Top Performance used in practise.

Wednesday - Mental Imagery Checklist.
- Mood Sheet.
- Competitive Relections.
- Preplay and Replay used in practise.

Weekend - Precompetitive plans established for league games.
- OPS (2).

**Through the duration of the weekend each athlete was met individually to discuss any concerns the athletes may have had regarding the imagery program. As well, precompetitive plans were established and guidelines for an event focus plans were given so athletes could work independently on establishing one.

Week 6 Nov. 24-30

Monday - Mental Imagery Checklist.
- Mood Sheet.
- Refine Precompetitive plans.

Wednesday - Mental Imagery Checklist.
- Mood Sheet.
- continue to utilize relaxation, top performance, instant preplay, and instant replay in practise.

Weekend - OPS (6).

Week 7 - Dec. 1-7

Monday - Mental Imagery Checklist.
- Mood Sheet.

Wednesday - Mental Imagery Checklist.
- Mood Sheet.

***throughout the week utilize of imagery techniques in practise was continued. Any concerns athletes had were addressed as they arose. Athletes used the techniques they felt most comfortable with rather than having dictated which ones they were to use, as was done the previous two weeks.

Week 8 - Dec. 8-14 - Wrap-up

Throughout the week athletes completed the Year-end evaluation and Dear Diary Reports and returned them by the end of the week to the sport consultant. Throughout the week individual meetings were held to discuss any final details or concerns regarding the completion of the study.

Specific breakdown of the classroom sessions were as follows:

Phase II

1-10 minutes - fill out Mental Imagery Checklist and Mood Sheet.
10-30 minutes - go through imagery technique script(s) and fill out evaluation form(s).
30-35 minutes - discuss any comments or concerns the players had.

Phase III

1-10 minutes - fill out Mental Imagery Checklist and Mood Sheet.
10-30 minutes - go through theory, principles, and guidelines that will best help athletes with the utilization of the imagery techniques

in the practise and competitive situations.
30-35 minutes - discussion of questions an concerns.

I. Data Analysis

The data analysis attempted to accomplish several objectives. These consisted of: the identification of the stressful factors, processes, and relationships influencing participants; the evaluation of the effectiveness, practicality, and implications of the imagery training program implementation process; the description of the acceptance, utilization, and effectiveness of the treatment battery; and the description of the evolved role of the sport consultant and her acceptance by coach and team members.

To analyze the data collected tables, graphical representations, and synthesized self-report comments or field notes were used. Tabled data was used to interpret the SMI and the Mental Imagery Checklist results. To obtain Mental Imagery Checklist tables category totals for each technique were compiled (refer to individual case studies). From these predominant utilization procedures for each athlete could be identified and us[redacted] prescribing potential action plans to foster further development of imagery techniques. For the SMI totals for each sensory modality in terms of vividness and controllability were tabled. Potential modality preferences could be identified.

The TAIS, Mood Sheet, and OPS were put in graphical represetation. Several characteristics pertaining to the magnitude of change(s) across phases and the rate of changes were addressed. Specifically, these were: changes in level, changes in trend, latency of change, and variability of responses, (Kazdin, 1982). Script evaluation responses,

comment sections on inventories, year-end evaluation forms, dear diary reports and field notes were synthesized into anecdotes for each participant.

J. Internal Validity

According to Kazdin (1980) "...internal validity refers to the extent to which an experiment rules out alternative explanations of the results" (p. 34). Threats to internal validity are factors or sources besides the independent variable which may explain the results. When using a single case time-series design internal validity may be threatened by history, maturation, testing, instrumentation, and statistical regression (Kazdin, 1980).

History refers to the everyday occurrences in the lives of the subject that may occur outside the experiment boundaries and which influence the individuals and the intervention technique. To help control this factor, both formal and informal interviews were conducted to provide athletes with the opportunity to discuss any outside factors which may have been affecting them. As well all the self-report inventories provided for this kind of feedback in written format.

Natural processes within the individual which take place over time are referred to as maturation. It is not always easy to distinguish if change is a result of normal maturation or due to the intervention. This was a concern in this study because the intervention process occurred over a long time period.

The OPS, Script Evaluation, Mood Sheet, and Imagery Checklists were all repeatedly administered and therefore subject to the threat of testing. However, the nature of the inventories were such that the

emphasis and circumstances surrounding the situation were varied. Therefore, the experiences from test time to test time were different enough that athletes would have different perceptions to take into consideration.

Changes brought on by variety in the measuring instrument or measurement procedures over time is referred to as instrumentation. Researchers must be careful not to make casual remarks at the time of the test so as not to affect the subject's response. The researcher attempted to read all scripts in similar manner, same room, same time, and same procedure. As well, all subjects received the same script and answered the same script evaluations in the same order, and at approximately the same time of day.

Kazdin, (1980) describes regression as "the tendency for extreme scores on any measure to revert or regress toward the mean of a distribution when the measured device is readministered" (p. 36). Significance may not be found through statistical analysis if scores are initially taken and are found to already be near the high or low end of a scale. These phenomenon are referred to as flooring or ceiling effects. On scales like the OPS, athletes may already be near their potential peak performance level, therefore it will be more difficult to obtain much change.

K. External Validity

The larger purpose of experimentation is to substantiate general lawful relationships. Given the boundaries of any particular study, the researchers can always raise questions about the generalizability of the results to other populations, settings, experiments, etc:

"characteristics of the experiment that may limit the generality of the results are referred to as threats to external validity" (Kazdin, 1980, p. 42). Potential factors that could influence generalization were Hawthorne effect, evaluation of treatments presented relative to previously administered treatments, and timing of administration and assessment of treatment (e.g., rather than at night and after a full day of school and volleyball training).

L. Delimitations

The twelve members of the University of Alberta Women's Volleyball Team for the 1986-87 season were the subjects for this study. The small sample size limited the generalizability of the results. The collection period was limited to a seven week time period from October 20 through to December 12, and covered part of the competitive schedule. Treatment presented to the subjects were twelve imagery techniques. Imagery was chosen for its practical application toward enhancing life, health, and performance. Imagery sessions were held twice a week.

M. Limitations

All participants received imagery training. Each individual responds differently to the same stimuli and the same individual may respond differently to different stimuli. Given this unique response pattern, individuals will find that some intervention treatments provide a more effective influence than others. For some of the subjects in this study, imagery treatment may not have been the most beneficial mental skill for them to employ, but in fact, different and

more dramatic results may have arisen given a different treatment tool.

Rates of learning varied. Some people are labelled as slow learners and some are labelled as fast learners. "Implementing the same treatment for the same duration to each subject disregards individual differences in responsivity and learning rates" (Rouse, 1984, p. 64). This factor may have influenced the results of the study. In this study, after the first three weeks, the program became more individualized.

The motivation level of the participants must be addressed when subjects take part in repeated evaluation processes. The subjecrs' attitude or disposition toward the routine may be affected by external occurances in their lives like those related to family, school, and social activities, and may have influenced responses on the inventories. Only the individual can control how much effort, concern, and honesty they exert in responding to the inventory.

The first three weeks of the imagery sessions concentrated on the classroom sessions. These were designed to assist the athlete in developing her imagery skills and preparing her to use these skills in practise situations. In the sessions, athletes were required to complete the Mental Imagery Checklist and Mood Sheet (Appendix A and D, respectively). Then, they were guided through imagery scripts, after which point they completed appropriate evaluation forms to monitor their experience of the script, and were provided with an opportunity to comment or discuss their experience publically.

Occasionally, there was some carry over of these sessions into practise situations. Some circumstances arose at practise where the coach or sport consultant felt it would be benefical to take advantage

of an opportune situation to show and/or provide experience for the utilization and implementation of the imagery skills being trained in the classroom. This spontaneous intervention was considered to be a 'coachable moment' and a critical aspect influencing the transfer of imagery skill execution from the classroom to the court.

To observe if any change in feeling states occurred while taking part in the imagery training program an athlete was asked to monitor her Optimal Performance State (OPS) prior to the start of any match. This was also initiated in phase two.

During the final three weeks of the imagery program, the classroom format was modified. The sessions still maintained the completion of the Mental Imagery Checklist and Mood Sheet. Rather than moving on to an imagery script, the remaining time was used to provide background information (i.e., concepts, principles, helpful pointers) on how imagery techniques would be utilized in the next on-court practise session or in competition. This information helped short-circuit some potential disruptions by familiarizing athletes with the expected procedures of the upcoming practise.

Together, both the coach and sport psychologist planned practise situations to include a specific drill, or drills, to be performed with the strict intent of having athletes focus on using the particular imagery technique appropriate for the circumstances. These situations provided good opportunities for the athletes to use, in an exploratory and competition-like atmosphere, the various imagery techniques being presented in the classroom sessions.

IV. RESULTS OF DATA ANALYSIS

A. Overview

The intent of this investigation was to present an imagery training program to twelve volleyball players and to monitor the effects of this procedure regarding implementation, utilization, effectiveness, and acceptance of the program. As well, consideration was given to the sport consultants role in these processes. A multi-method approach was used to explore these processes which allowed for the accumulation of a large amount of information. To present the findings, Chapter IV was composed of six sections.

The first section, 'The Evolved Roles of the Team Sport Consultant' presents an analysis of the helping interventions used by the sport consultant. Of specific concern were the factors influencing the integration of psychological skill development and utilization as an integral part of an overall training program. Implications for future training and effectiveness of sport psychologists were addressed.

The second section, 'Imagery Training Program Evaluation' described the effectiveness and practical implications of the various instruments used to obtain the data. As well, this section includes a discussion on the value of the overall program and imagery training process.

The third section, 'Stressful Factors, Processes, and Relationships,' includes a general description of the physical, academic, and social demands on the university volleyball participants. The intent was to give some insight to the circumstances which define the experience for the team members during the 1986-1987 volleyball season. Particular interest was paid to the general and

specific stresses and strains influencing a player's life. The impinging social, physical, and academic factors creating the participants' 'lived world' provide the reader with a good 'behind the scenes' account and 'feel' for life as a university volleyball player.

The fourth section, 'Acceptance, Utilization and Effectiveness: Imagery Training' was presented in two sub-sections. The first sub-section discussed how well the imagery training program was accepted by the coach and the participants. Sub-section two described the utilization and effectiveness of imagery training through single subject case studies. This type of format allowed the special idiosyncrasies, personal qualities and needs of each individual to be highlighted. Insight regarding individualization procedures within the natural setting were also pointed out.

The fifth section, 'Group Trends', attempted to globally integrate the findings of each subject and provide some sense of general group characteristics. Finally, the sixth section, 'Summary', serves to briefly outline the findings presented through the data.

B. The Evolved Role of the Team Sport Consultant

Roles

Lee was the sport consultant for the Panda volleyball team for 1986-1987. Her involvement started approximately one month after the team was selected and continued until the end of the university regular season league. Throughout this time, the role evolved by Lee could be considered 'atypical', of most sport consultants, 'atypical', because unlike most consultants who are afforded limited contact with a team due to financial, time, and location factors, Lee had the opportunity to become a completely integrated member of the team. With official

title of 'team sport consultant' and responsibilities as the 'mental trainer', Lee was committed to full attendance of practise sessions, home league games, and home tournaments. On one occasion finances permitted that Lee travel with the team for an away road game. Lee could have been considered an 'in-house' or 'live-in' team sport consultant.

From this 'in-house' perspective, Lee had a clearly defined role with responsibility to conduct mental training sessions. This aspect was straightforward with regular bi-weekly classroom sessions. During these sessions, Lee's roles could be described as a teacher and an optimizer. As teacher, she transmitted psychological knowledge to the athletes and helped them explore experientially with this knowledge. This teacher role extended into actual practise and competition situations where further guidance was provided to help athletes explore experientially, in actual competitive situations, the use of the same skills presented in the classroom.

'Teachable'or 'coachable' moments arising during practise were utilized to best anchor the knowledge presented. Quite often, Lee was asked to assist in the running of drills during practise even though the activities were not being incorporated to explore mental skills specifically. This helped instill credibility in the athletes' eyes regarding Lee's knowledge of volleyball and her involvement as support staff. As well, it was an opportunity for Lee to get a closer feel for what participants were going through because she could experience some of the subtle occurances. For example, she could hear breathing patterns, under the breath comments by players and the coach, get a better perception of focus points of particular drills, and experience the tempo of different drills.

In the teacher role, it was important for the consultant to be well researched in terms of practical exploration and experience, and theoretical knowledge. Being able to draw from both pools of knowledge potentially provides more insights on the obvious and subtle means for helping athletes. As well, being able to talk to athletes from both perspectives enhances credibility. Furthermore, the teacher must weigh the circumstances surrounding the situation she enters and determine how to best help the team and players. Of paramount importance is the divisional breakdown of theory and classroom presentation to 'hands on' and practical exploration.

As an optimizer, Lee provided athletes with the opportunity to learn and test new psychological skills which could assist them in optimizing performance potential. For the classroom sessions, Lee structured the sessions independently of the coaching staff. The intended purpose and procedure for the sessions were reviewed with the coach at the beginning of the season. This general outline was followed with only minor adjustments being made. On occasion, the turn of events leading up to a certain session (e.g., late practise combined with fund raising event requiring mandatory attendance) required the imagery session to be modified (e.g, shortened or addressed a specific skill that was going to be the focus of practise - serve receive). Although not always the case, the coach and Lee were usually able to discuss the kinds of modifications that would be best suited for the team.

The most important task for the consultant in the optimizer role was the individualization of mental training programs. Individualization was the best way to optimize the performance of the

athlete. This required commitment, thus allowing the optimizer to get to know each athlete in terms of her strengths and weaknesses, what has worked or not worked for her in the past, what the athlete wants to work on, and understanding of her unique, idiosyncratic character and the resultant influences upon her ability to utilize mental training skills.

Another important role for the optimizer was to provide athletes with experience and guidance on how to set out action plans as well as how to monitor the implementation of the action plans. These action plans are intended to help athletes become aware of alternative means for developing mental skills through identification of factors, principles, and guidelines that affect this development. Ultimately, it is the athlete who must learn, refine, incorporate, and refine some more her mental skills. The optimizer wants to facilitate this process while instilling self-control and self-responsibility in the athletes for the maintenance of this process.

Halfway through the study, the main focus of the mental training package became the 'transfer' of skills from the classroom to the practise or competitive situations. To insure minimal disruption of the flow of practise a lot of planning was required. To do this, Lee would find out from Kim what drills would be conducted at practise and then pick one or two of these that seemed most appropriate for athletes to use to explore a particular type of imagery technique. Kim and Lee would coordinate the utilization of imagery techniques into the overall practise. In this respect, Lee was a consultant for program conduct.

Prior to the actual practise session, one of the classroom time blocks was used to prepare athletes for the implementation of mental

imagery techniques in practise. The intended practise procedure was presented along with suggested guidelines or tips to help athletes with utilization. This classroom time gave the athletes a chance to ask any questions or air concerns before entering the actual practise.

As consultant for program conduct, it was important to respect the coach's position and not over step the bounds of the consultant's role and impinge on the coach's responsibilities. At this time, the consultants main goal should be to help the coach develop a mental training package that she can, in turn, incorporate to facilitate the athletes' development of a mental training package. In this way, the consultant is gradually phased out and the coach and athletes together become responsibile for mental training development, knowing the consultant can be called in from time to time to provide further direction or to deal with specific problems.

Not so clearly defined was Lee's role during practise or competition when mental activities were not being incorporated into drills and her services were not required to assist in any manner with the running or execution of the practise activities. During these times, Lee became an observer and an analyzer. This time allowed her to observe the meaningful interaction of all the participants as individuals in a social context. Understanding the influences of each individual on the group and influences of the group on each individual allowed important awareness of the impinging group dynamic to emerge. This would help put individual problems regarding imagery development in appropriate perspective and context.

The nature of mental training directs the consultants focus largely

to aspects of intellect or thought and emotions. In helping athletes become more aware of their thoughts and emotions and providing skills to help control these, a consultant is often used in the counselor role. Lee quite often found herself acting as a counselor for conflict management or stress management purposes.

In most circumstances, Lee would have some forewarning that an individual (either player or coach) had something bothering her, yet the actual meeting was unplanned, unannounced, and therefore, spontaneous. Counselor encounters often revolved around communication problems between the coach and the players, both as individuals and as a group. Initially, Lee was a sounding board where players attempted to feel out Kim's potential reaction to certain situations and as well, Kim would try to get some feeling of how Lee felt the players would react to certain circumstances or feelings on why players were having difficulty with a certain situation, event, or circumstance. The trouble the participants experienced in communicating amongst themselves created a lot of tension and inhibited self-initiated attempts to deal with the problem.

In dealing with these matters Lee became an intermediary between coach and athletes. This role was carried out in two ways. One was for Lee to communicate with one participant on behalf of another participant (i.e., talk to the coach about a player's concern or vice-versa). The other means was for Lee to facilitate discussion between involved parties in small group meeting or team meeting. As an intermediary, it is important for the consultant not only to deal with the problem she was called in to deal with but to also provide steps and skills to the coach and athlete's for future use so as to 'short

circuit' similar circumstances from arising again. In a sense, the intermediary wants to take a 'proactive' approach in order to prevent problems from occuring by dealing with the cause rather than being reactive and dealing with symptoms.

Acceptance of the Sport Consultant

In a participant-observer style of research, acceptance of the observer by the participants is a key factor in the establishment of natural field relations and the attainment of accurate and truthful recordings. Gravelle (1977) suggests that acceptance depends on: time spent in the field, the observer assuming a legitimate role in the eyes of the participants, and the observer's expression of a genuine interest in the people being studied.

In her role as participant-observer with the volleyball team the researcher conducted year-end evaluations to assess to what extent the imagery training program that athletes and coach were exposed to affected them. The design of the evaluation attempted to address the specific components that affected the participants and the direction (hinderance or help) of the affect. Part of the assessment focused on evaluating the sport consultant.

The university setting enhanced the acceptance of the research since veteran players had been involved in previous research studies. As well as students, the athletes had some awareness of the research efforts of the Faculty of Physical Education and Sport Studies.

All athletes expressed a strong acceptance of Lee. They respected her knowledge of both mental training and the game of volleyball. Lee was able to create an informal, relaxed, and open atmosphere where athletes felt comfortable, cared about, were able to communicate, felt

understood, and of value. The qualities Lee displayed that fostered such an environment were an open, flexible, collaborative, cooperative, positive, and constructive attitude.

Her sincere, encouraging, and enthusiastic manner helped her to fit in with other team members. Players felt she was easy to relate to and presented relevant ideas pertinent to each individual athlete's needs. The players were confident in the knowledge she shared with them and were respectful of the dedication and concern Lee showed in trying to help each team member.

The coach was also accepting of Lee from their very first meeting when they discussed using the volleyball team for Lee's study. The coach had intended to incorporate mental training into her program before Lee had approached her. With Lee's assistance the coach would be able to concentrate more on the physiological, technical, and tactical aspects and still include mental training with Lee's program. Philosphically, the coach and Lee shared similar viewpoints regarding athlete preparation for the sport. Both believed mental training was a critical aspect of competitive preparation. The coach and Lee got along well and provided each other with feedback and different perspectives on various situations and circumstances. Each was respectful of the other's position and responsibilities.

C. Imagery Training Program Evaluation

The Instruments

The use of the Background Questionnaire provided a quick means to obtaining basic, yet valuable information. Through the questionnaire the sport consultant was able to get some feeling for each persons

previous sport related experiences.

The Goal Sheet was also a quick means for obtaining general information on each athlete. This provided some indication of past experience, present interests, and future dreams, not only in volleyball, but in academic pursuits as well. From time to time goals could be refered to in order to monitor movement toward desired outcomes. Both the Background Questionnaire and the Goal Sheet were useful for the sport consultant in developing some understanding for the participants both quickly and early on in the study.

The acutal administration of the TAIS tooks approximately 20 minutes and scoring was done through a computer program. Depending on familiarity with the subscales, interpretation of the scores requires considerably more time to compile (e.g., for this researcher it took between 1 to 1.5 hours to interpret one profile). Interpretations of TAIS were mainly intuitive and subjectiye appraisals of the scores. In order to make any specific comments regarding how the information could be used to improve athlete performance feedback from the athletes was required. In this respect, the TAIS served as good interview topic because it was something specfic to discuss and encouraged feedback and involvement of the athlete. As well, the TAIS profiles provided some indication of the kinds of mental errors an athlete was likely to make during a game, and why, she made them, based on her particular attentional style. The attentional scales pointed out what tended to happen to an athlete's ability to concentrate when game pressure caused her arousal level to increase. Interpretation of the TAIS attentional scale looked at what kinds of psychological stress a participant was likely to experience, and why, during a game and the effect it would

have on her attention. Through the test, athletes were made aware of the implication underlying the TAIS, namely, that there is no all-encompassing perfect way of concentrating in sport. This is because different tasks and different situations require or demand different focuses of attention. Thus, one style of attending will be appropriate in some situations and not in others.

In regards to interpersonal scales, the profiles identified general styles of interacting with other people, and how this style would both help or hinder athletic performance during competion and during training. Further, specific interpersonal situation which might by stressing or arousing for her. Given the awareness of interpersonal and attentional styles; the time needed for administration, scoring, and interpretation; and its value as an interview topic, this researcher felt the TAIS was a useful instrument for the purposes of this study.

The Survey of Mental Imagery (SMI) took a little longer to administer (e.g., 30 minutes). For this study access to computer analysis was not available. Scoring time could be greatly reduced with proper computer program assessibility. Resulting scores were very individual. The actual results of the survey were of little interest to the athletes. For the researcher the results of the survey were used at the completion of the study to compare sensory modality experiences. Three quarters of the team (9) obtained significant results at the .05 level when using Spearman's Correlation Coefficient for Rank Order to compare frequency tallies done for the sensory modalities experienced during the spontaneous use of imagery techniques to SMI sensory experiences. Beyond this it appeared that the SMI's most practical value was in helping the athletes get an understanding

for the meaning of the various sensory modalities. For example, when first presented with the term someothetic, many athletes had trouble understanding what was being infered. After attempting specific images suggested in the survey they felt more informed in regards to terminology and meaning. Given the time needed to score and interpret the survey and the fact that the questions or images have little relivance to sport this researcher did not find this instrument to be of much practical use. Perhaps, some other instrument, more closely associated with sport or movement would have been more appropriate.

The mental imagery checklists were totalled for each imagery technique, for each individual. This data was then presented through table form (refer to individual case studies). From the tables, predominant utilization procedures could be described regarding the frequency (f) with which imagery techniques were used, the average time (t) each technique was used, the perspective from which imagery was conducted (p-participant, o-observer, or b-both), the position imaged from (s-sitting, st-standing, or l-lying), the sensory sensations experienced while imaging (v-visual, a-auditory, t-tactual, g-gustatory, k-kineasthetic, s-someothetic, and o-olfactory), the purpose for using imagery (s-sports, a-academic, or o-other), the speed of imagery (s-slow, n-normal, or f-fast), and the effectiveness of imagery (ve-very, qe-quite, a-adequate, se-somewhat, and ne-not). A profile of this information was presented in table form. In obtaining the average utilization times per imagery technique, time measures were converted to minutes. Those times broken into seconds were first rounded to the nearest five second division (i.e, 16

seconds was rounded to 15 seconds = .25 minutes, 18 seconds was rounded to 20 seconds = .33 minutes). All other scores were total experiences for a specfic category.

These checklists took about five minutes to fill out. Both the sport consultant and the athletes could use the information immediatley to suggest possible alternatives to enhancing a certain experience or to identify and find ways to refine those aspects that were already beneficial to experiencing imagery techniques. As well, over time trends and inconsistencies could be identified. The mental imagery checklist was used regularly by the sport consultant to help point out to the athletes potential aspects to deal with in order to individualize and improve imagery training. It appears to have been a valuable inventory for the monitoring of imagery skill develop.

The mood sheet took about five minutes to complete. An average mood state for each day was plotted on a graph to show if any trends emerged over the duration of the study. As well daily mood states were used to show if any trends were apparent on a daily basis. Further, the comment section of the inventory allowed athletes to point out factors they felt were influencing their mood. The comment section was very useful immediately because it provided instantaneous feedback on aspects athletes felt were stressing them. With this information action plans could be set up to deal with the circumstances. To identify any trends or inconsistencies a certain number of mood sheets needed to be collected so graphical or visual representational analysis could be done. For this study, the value of the mood sheet was in the emergence of information that helped to verify or deny circumstances that athletes or the sport consultant perceived to be influencing mood

states. The mood sheet appears to be a useful inventory for this type of information.

During the first three weeks of classroom sessions the athletes were guided through imagery scripts. To evaluate these experiences, script evaluations were developed. Immediate feedback was provided such as certain feeling states or distracting factors. Over time, evaluation forms could be reviewed in an attempt to identify any trends or inconsistancies. As well the responses could be compared to the mental imagery checklist and to the participant observation field notes to confirm or contradict the findings there. As well as providing feedback on the participants, for the participants, the script evaluations also provided feedback for the sport consultant regarding tempo and tonation of reading the script. All this information was used in an attempt to make future classroom sessions better. This inventory was a nice complement to the imagery technique scripts.

Throughout the study the team played a number of matches. Optimal Performance State (OPS) measures were taken following the completion of each match. Total OPS scores for each match where graphed over time. Unfortunately, not much information was gleamed from these efforts. It would seem that doing the inventory after the match may have been influenced by the outcome of the games. Further, the time needed for one, identifying, and two, for mastering or controling their OPS may require more than six weeks. This could also have been influenced by the actual number of matches players were involved in, and the spacing of these games. The most number of matches a player could have played in was 16. However, due to injury or sickness some players played less than this. The least amount of matches involoved any one player was

involved in was 5. As well, matches were generally held on weekends, then there would be a break for a week or two before playing again. Generally, the OPS did not appear to be an effective inventory given the parameters of this study. However, with some modifications in implementation it may prove to have better practical use than experienced with this study.

Year-end evaluations were quickly administered and provided immediate feedback on both the imagery training program and the sport consultant characteristics and services. The responses helped the sport consultant to check that her perceptions regarding athletes acceptance, utilization, and evaluation of the various components of the program. These apsects were checked further with the information from the Dear Diary reports. The information on both evaluations could be compared for consistancies or inconsistancies. As well these served as good means of receiving feedback on how to alter or adjust the program to make it better in the event that it was implemented again.

The Program

This appeared to be an effective approach to helping develop imagery skills which could be used for competitive sport preparation. The athletes were accustomed to 'chalk-talks' or 'lecture' style presentations and this seemed to contribute to their receptiveness of the theory and information sharing aspects of the program. It appeared that this background and preparatory information provided the participants with a good base from which to explore and experience imagery exercises. This meant that before actually going through an exercise the athlete was conscious of some of the factors to observe. The regular information sharing combined with the subsequent

exploratory exercises provided practical experiences in relatively low stress situations. This increased the potential of the athlete attempting the exercise without being distracted and losing sight of the factors to be monitored.

Letting athletes explore techniques in first relatively stress free, supportive environments and then gradually progressing to more stressful and 'game like' situations provided opportunity to draw bridges between the 'talked about' experience with the 'lived' experience and relate each to the other. Comparisons of this type assisted athletes in identifying the unique and idiosyncratic functioning that make imagery work best for them. Although the athletes acknowledged that the opportunity to use the imagery techniques in practise and competitive situations were beneficial, the three week time period was too short for them to become proficient with the techniques. To increase the effectiveness of the transfer process, a longer time period for exploration should be allocated, and/or a follow-up plan developed.

Rarely would a consultant have the time to devote to a team on a full time basis for one season as was done in this study. Although finances were not an issue in this study, rarely would a team (even at the elite levels in Canada) be in a situation where funding permitted them to hire an 'in-house' consultant. For these reasons, the direct implementation of the process used in this study may not be entirely practical.

However, if one looks at the imagery learning progression, the practical implications warrant further consideration. The imagery learning progression was a cyclical process where an athlete was guided

through an education phase, experiential phase, and an evaluation phase. Throughout this learning process, new awarenesses emerged which can be used to direct athletic effort, energy, and time. This type of learning process appeared to have practical merit.

Some athletes expressed concerns for the ratio of time committed to individual versus group imagery training. When considering imagery training with a team, as compared to an individual sport, the predicament of deciding what percentage of time to spend on group activities compared to individual counselling becomes paramount. Using either strictly group presentation or individual presentation provides various advantages and drawbacks.

In order to deal with the team and the individuals composing the team, the notion of utilizing both group and individual sessions had practical applications. Group sessions allowed the consultant to present important background information, relatively quickly, to a large number of people. As well, group sessions have potential to enhance learning. Sharing circles potentially generate a lot of information, (by virtue of the stimulation each individual provides for other members of the group), that can be used by all the participants involved. In other words, group stimulation may bring out ideas more quickly than they would be discovered through individual exploration. Information regarding what was working for a particular individual, what was not working, how a particular situation made her feel, how she wanted to feel, and ideas on how to make techniques work emerged. Groups also allow athletes to familiarize themselves with fellow teammates preferred behaviors or responses in certain circumstances and

generate a stronger understanding of each other.

Once athletes have received the background information, individual sessions were valuable to incorporate. Individual sessions allowed for individualization. Through identification of special and individual needs an athlete could develop an imagery training program that suited her best and accommodated her unique idiosyncrasies. In the individual setting, the athlete may not feel as inhibited and self-conscious, thereby divulging more insightful and meaningful input to assist with individualizing her program. Contracts between consultant and athlete can be better specifically designed, monitored, refined, and individualized with one on one contact.

D. Stressful Factors, Processes, and Relationships

The average age of the twelve players was 18.75 years. Six (50%) of the players were first year university players. Two of the twelve were new to the university volleyball league but had two years of college volleyball to their credit. Another two players were back for their second year of university eligibility. One player was going into her third season, and one player was a fourth year veteran. In athletic terms, the 1986-1987 volleyball team was young, inexperienced and in a rebuilding process.

Not only were the team members young, the coach, Kim, was also young. At 24 years of age, she had just completed a final season as a player with a Canadian Interuniversity Athletic Union Championship Team and was assuming her first major coaching position. Prior to this, she had moved up through the ranks of the volleyball world progressing from high school, club, provincial, university, and eventually, national

team membership. As a player with many varied competitive experiences, she became an analyst of the game and the people playing it. Despite her limited coaching experiences, the knowledge base she had acquired through her own training and observations combined with her exuberance for volleyball provided a good foundation for the beginning of her coaching career. In her own mind, she had a clear idea of how she intended to establish herself in the coaching profession.

Her development as a player was reflected in the personal qualities she brought to training and competitions as a coach. A very ambitious and committed individual, Kim worked with dedication, determination, intensity, concentration, and precision. Throughout an extremely physically and mentally challenging training regime, Kim expected and demanded precision and similar displays of intensity, dedication, concentration, and determination from her players.

A lot of the stresses experienced by the coach appeared to have been self-imposed. She put pressure on herself to develop a 'respectable' program and one that produced winners. She believed that, in order to achieve this goal, a hard, autocratic leadership style was the appropriate approach. With this style the coach anticipated having strict control of each athlete's behavior on and off the court. Volleyball became the focal point of her life and she pursued this task with single-minded determination. She expected this same commitment to be adopted by players.

This approach and style of leadership was unfamiliar to most players. To compound this intense atmosphere, the lines of communication were ineffective. As a result, tension between players and coach emerged and was difficult to dissipate. Stresses developing

in other areas of the participants' lives such as school and work seemed escalated because of the ever present tension in their volleyball milieu.

All the players came from a background of pleasant and supportive family members and circle of friends. Two-thirds of the players (8) were living at home while the other four were living away from home. Two of the players were doing so for the first time. The commuting time and mode of transportation to school was quite varied as some lived within walking distance of the university while others lived about a 20 - 30 minute drive away. Generally, the home situation was a very supportive and comforting influence for players. Any stress coming from this area was in preparation of late meals or a longing to be home more often to carry out other domestic responsibilities (e.g., laundry, shopping, socializing or to get some sleep).

Prior to coming to play university level volleyball the players had been quite active as athletes during their high school education and strong contributors to their volleyball teams. Academically, they had been conscientious students and had little trouble juggling both. Basically, they were well-functioning, young individuals with healthy personalities pursuing further interests in academics and athletics.

Up until this point, their volleyball, training had focused mainly on physical development (i.e., setting, spiking, blocking, etc.), and very little, if any, structured training time had focused on psychological skill development. For three of the players, the experience of an eight session coping strategies program (Crocker, 1988) earlier in the summer had been part of the provincial team preparation.

The ability to simultaneously pursue excellence in athletics and academics at the university level was a dilemma faced by the coaching staff and players of the volleyball program. With the time schedule demands of training, competition, classes, and homework, little spare time for personal activities remained. As a result of a commitment to both volleyball and academic pursuits, the players were faced with dual responsibilities.

The demands of the dual responsibilities of school and sport plays heavily on the physiological and psychologcal functioning of the individual. This was most obvious in energy levels which were influenced by activity level, health, rest, and diet. The compounding affects of psychological stress such as exam anxiety, uncertainty, fear of failure, feeling of overload, and conceptualizing and formulating papers further depleted energy stores.

From a time management perspective, the average week day included three hours of team practise. On Tuesday and Thursday, an additional 30 minutes was required for jump training. Monday and Wednesday an additional 30 minutes for both a cycling workout and an imagery session needed to be scheduled. Each athlete had a one hour individual technical development session at some point during the week. Many weekends were taken up by league games or exhibition play. Above and beyond this scheduling were slightly varied time utilizations for showering, changing, taping, warm-up, and injury rehabilitation. On occasion individual meetings with the coach or team sport consultant were arranged as well. Academic courses were scheduled amongst these training sessions.

To try and manage the dual responsibilities of their

student-athlete roles many of the player's took reduced course loads. On average, each player had enrolled in either four or five courses for a range of 12 - 18 hours of class per week. Every player's objective was to pass all her courses and strive towards a grade point average of 6.7 or higher. This appeared to be a realistic goal as all athletes had previously maintained comparable marks in previous educational settings while being quite active in extracurricular sports (e.g., high school, provincial level, etc.).

To participate as a university athlete requires sacrifices in other areas of of one's life, considerable investments of time and energy to training regimes, and modifications to typical student time scheduling had to occur. The players situation seems accurately described by Mihalich (1982), who offers the following depiction of the predicament faced by the typical student-athlete:

> Compared to nonathlete students, the student-athlete has two sets of responsibilities and obligations and two sets of goals and objectives. These combined academic/athletic requirements subject student-athletes to two sets of taskmasters vying for their undivided time and attention, two sets of priorities vying for their finite time and energy, and two sets of possiblities for success and failure, with all the attendant hopes, anxieties, and fears, (p. 11) ... Serious intercollegiate student-athletes are pressured physically by demanding and often extended practises and contests, and pressured psychologically in many ways including required absences from class and lack of free time to complete routine classroom assignments and other academic obligations. Perhaps the greatest pressure of all in the college life of student-athletes is the total inflexibility of athletic participation - practises and contests and the need for physical and mental readiness occur on a relentless daily schedule that lasts for months and exists always in the recesses of consciousness. (p. 98-99).

In assuming the role of a student-athlete, each player had expectations of what the experience would be like. In most instances, these expectations were general (e.g., 'I will get along and become good friends with my teammates', 'I will get in good shape', 'I will

get along with the coach', 'volleyball will be a good sideline from school', 'the training will be tough but enjoyable'). It was stressful when these expectations turned out differently than anticipated. In some instances, athletes were able to step back and re-adjust goals to better suit the experience while in others they could not adapt.

As a team, the players were a close knit group with no persistent internal groupings or cliques. Occasionally, there were 'veteran' versus 'rookie' intiation activities which some players felt detracted from team unity at times . Otherwise, the general team cohesion and dynamic was a positive influence. The team proved to be a very cohesive support group for each other. This support was reflected in the comeradery, caring, and compassion displayed for each other on and off the court.

Like any other mentally healthy group of athletes or individuals the volleyball team faced many potentially stressful and strain-producing situations. The main ones described in this section centre around volleyball: technical and tactical execution, injury, fatigue, atmosphere of the training environment, feedback received from the coach, and interpersonal conflict; around academics: indecision about what area of study to pursue, attendance of classes, completion of homework, term papers and examinations, and outcome of examinations; around communication problems between all parties; and around: general life activities such as socializing, evaluation and readjustment of personal expectations, and taking care of domestic responsibilities.

E. Acceptance, Utilization, and Effectiveness: Imagery Training

Acceptance of the Program

At the beginning of the school term, Lee approached the coach to discuss the possibility of providing the volleyball team with an imagery training program. The coach and Lee met several times over the first couple of weeks to discuss sporting philosophies, the role of mental training in sport, and the possible options for incorporating Lee's imagery program into the coach's intended volleyball program. Throughout these meetings, the coach was very supportive of the value of mental training in competitive sport preparation and Lee's proposed program.

Both the coach and Lee felt the imagery program would be beneficial to the team and proceeded to work out the details of its implementation. The coach was very receptive and supportive of the imagery program Lee proposed. The coach had intended to incorporate mental training herself and felt Lee's involvement would fit in nicely. Before initiating the program, she first of all wanted the team to be picked and given some time to get settled into the program. This acclimatization time would allow the coach to do some goal setting and team building.

Generally, the coach was very accepting of the program and demonstrated this acceptance when introducing Lee and the imagery program to the team. Here, she expressed the importance of such a program and how fortunate the volleyball program was to be able to take advantage of Lee's services. Periodically, throughout the year, during team meetings or when 'coachable moments' arose the coach would re-emphasize the importance of mental training and the importance of

players using the skills Lee was providing them. Sometimes the coach would describe situations where she used the skills (i.e., usually to relax or clear her mind to help her deal with marking or other school work), and indicate how they had helped her.

However, in the volleyball environment, she did not always use the skills herself to help her behave in ways she expected the team to behave (i.e., players were expected to show no emotional outbursts, either overly joyous or angry, frustrated, and so on yet, quite frequently the coach herself would display emotional outbursts). This was hard for the players to digest because they saw these inconsistencies or double standards but did not feel comfortable approaching the coach to discuss the situation.

Initially, the majority of the players appeared open and eager to try the imagery program. The general consensus seemed to be that imagery training was a factor of mental training that could help them improve their game. Anything that could potentially help them was worth a try. The coach's and consultant's enthusiasm for the program may have also influenced players to be more receptive to try it out.

Not all players were readily accepting of the program. Three players indicated skepticism. One of these players indicated that her initial feelings were "thinking mental training was a waste of time...I can't do something because I'm told...I need to see credibility." The consultant speculated that there were two other players hesitant to accept the program. This speculation was based on observations made during initial exercises and manner of responses and comments concerning the effectiveness and value of the techniques.

Throughout the study, discussion sessions were set-up after each

classroom session. At this time, players had the opportunity to share any of their experiences or concerns regarding imagery. This sharing let players know what things were working for others, what problems others were having and basically provided some 'food for thought' for each other. These incidents served as good 'sales pitch' for the skeptics because it was fellow peers expressing their experiences, rather than some person they had only known briefly, talking about the value of it.

By the end of the study, all the players were accepting of the imagery program. All participants found value in certain components of the program. No participant found any part of the imagery program to have a hindering effect. 'Valuable', 'worthwhile', 'helpful', and 'an asset' were some of the comments used at the end of the season to describe how athletes felt about the program.

Case Studies

The essence of conducting and writing up participant-observation type research is to understand the vital, unique, and at times, painfully personal aspects of existence. Certain ethical considerations are important to note. To preserve anonymity so the subjects are not identified becomes a difficult problem to resolve. This is even more difficult given the university (a specificaly identified one at that), one women's volleyball program, one head coach, and 1986-1987 season. Readers close to this university environment may start to put the pieces together and figure out who the characters are. To confront this problem, the researcher was the only person who had access to the collected data (each individual player could obtain her own file if she so desired). Any field notes were

kept in draft and utilized only by the researcher. Pseudonyms were used to further help in establishing anonymity. Finally, as Gravelle (1977) states, time is another factor which may help protect anonymity ... "As time passes, crises lose their urgency and are soon forgotten. Human memory is short, and people soon forget what was said and done by others and themselves as well."

The following case studies discuss the utilization and effectiveness of the various imagery techniques for each athlete. A number of specific components of imagery were identified and monitored by using the imagery checklist. The breakdown of each athlete's specific utilization tendencies for the imagery techniques are charted in corresponding tables for each player. The tables present quantitative data on specific procedural factors used in implementing imagery. Further proliferation of individual idiosyncrasies surrounding an athlete's experience with imagery is achieved by complimenting quantitative data with a synthesis of the qualitative data collected. This additional qualitative data attempts to present some of the possible factors influencing the individual patterns of imagery utilization.

Table categories run horizontally across each table. Several categories have further divisions which were abbreviated. Totals for each division are presented along the bottom of the table. These totals provide some indication of which procedural tactics a particular athlete used most predominantly and those rarely used or not attempted. Technique effectiveness was also presented. An explanation of the abbreviations, as read from left to right, was presented in Table 1.

Table 1: Case Study Table Legend

f - frequency or number of attempts made to use a specific imagery technique.

time average minute/day - average time per day that a particular imagery technique was used.

Viewpoint:	P-participant or internal perspective. O-observer or external perspective. B-both perspectives.
Position:	S- sitting. St-standing. L- lying.
Sensory Sensation:	V-visual sensation. A-auditory sensation. T-tactile sensation. G-gustatory sensation. K-kinesthetic sensation. S-someothetic sensation. O-olfactory sensation.
Purpose:	S-sport. A-academic. O-other.
Speed:	S-slow. N-normal. F-fast.
Effectiveness:	VE-very effective. QE-quite effective. A -adequate. SE-somewhat effective. NE-not effective.

Adri

Adri joined the team five weeks into the season due to unusual circumstances (i.e., drop-outs from the volleyball program, previous

volleyball experience). As a fourth year student with previous intercollegiate and high school athletic experience, scheduling time for school and sports was not something new for Adri. She had learned to be disciplined in a busy environment. Juggling school and athletics had become a way of life for Adri and her friends were empathetic and understanding of her resulting time constraints, " ... 'what social life' - actually it's not that bad. I've always been very busy with sports and school, my friends know that and I make an effort to go out with them when I can".

Generally, school was a positive and enjoyable experience for Adri. She did not find it a chore to keep up with homework ... "For me its (school) always pretty much the same. When you've always been busy you learn to adapt, study when you can. I like school so I don't find it a big problem." In her limited free time, she often preferred quiet, reflective time to herself to relax or to work on school assignments.

The unfortunate predicament Adri found herself in because of the dual responsibilities of a student-athlete was a conflict between scheduling of a school course exam and travel arrangemets for league play. Adri had an exam scheduled on the same day the team was scheduled to travel for a league game. Generally, academic departments and professors are cooperative in such circumstances and athletes are able to defer or re-schedule exams. In this case, however, Adri's options were to stay behind and write the exam or go on the trip and fail her exam. This was a stressful decision for Adri to make because she realized her major adjustment in joining the team late was in trying to

get to know the players, the coach, the program, and becoming an integrated member of this group. The team had already been together when she joined and were familiar with each other, while she was a bit of an outsider. She knew road trips were a "great way of developing team unity and friendships". Missing out on the first road trip since joining the team bothered Adri.

Table 2: Imagery Utilization Factors and Effectiveness: Adri

Technique	f	Time ave. min/ day	Viewpoint			Position			Sensory Experience							Purpose			Speed			Effect				
			P	O	B	S	ST	L	V	A	T	G	X	S	O	S	A	O	S	N	F	V	Q	A	S	N
Basic Performance	25	7.2		4	3	3	6	4	7	1			3	1		8		6		8		8	2	2		
Ideal Model	22	2.1		5	1	2	4	1	6				2			7		3		6		1	7	1		
Top Performance	20	2.8		3	2	2	2	2	5				1			6		2		5		2	6	1		
Rt Time/ Rt Place	12	2.3		1	2	1	2	1	3				1	1		3				3			1	2		
Instant Preplay	25	2.25		3	3	2	5	2	7	1			2			7		5		7		2	6	5		
Instant Replay	25	4.7		2	4	2	5	3	7	2			3	1		6		4		7		4		5	1	
Performance Review	22	11.2		3	3	6	4	5	6	2			4	1		7		6		6		12	1			
'As if'	4	2.5			1	1			1							1				1			1			
Relaxation	9	2.9	1			1	1		1				1			2				1		1		1		
Parking	10	2.6		1	1		2		3				2			3		3		3		2		3	1	
Energization	13	2.6	2			1	2		3				1	1		3		1		2		4		1		
Cue Image Relax																										
Cue Image Energize	1	2.5														1								1		
Total	188	3.8	P= 3 O=22 B=20			S= 21 St=33 L= 18			V= 49 A= 6 T= 0 G= 0 K= 20 S= 5 O= 0							S=54 A= 0 O=20			S= 0 N=49 F= 0			V= 0 Q= 36 A= 24 S= 22 N= 2				

Adri's most frequently utilized imagery techniques were 'basic performance', 'instant preplay', and 'instant replay' each of which

were used 25 times or 13% of the total imagery attempts made by Adri. On average, it took Adri 3.8 minutes to use an imagery technique. 'Performance review' took the longest average time (11.2 minutes) to complete. 'Basic performance' technique averaged 7.2 minutes to complete. 'Ideal model' required the least amount of time to complete at 2.1 minutes. Adri did not use 'cue image relaxation'.

Adri did not find any of her imagery experiences to be 'very effective'. However, 43% of the time (i.e., 36 trials) the outcome was 'quite effective' and 29% of the time it was 'adequate'. Two (2%) of the time or for 2 of Adri's attempts to use imagery the results were 'not effective'. In these instances, she had attempted to use 'instant replay' one time and on the other occasion 'parking' was attempted.

When Adri used imagery, her predominant purpose was to enhance some aspect of her sport activities. While 65% of the time (54 trials), she utilized imagery for 'sport' and 35% of the time, she used it for 'other' reasons. She did not use imagery for school purposes. Perhaps, she was using some other form of mental skill to help with academic studies or her use of imagery for academic purposes was unconscious.

When creating images, she did not experience gustatory, tactile or olfactory sensations. Visual sensations were the most predominant sensory experience for Adri and occured 61% of the time that she utilized imagery. Whenever Adri used imagery, she always (100%) created experiences at the same speed they normally occured at.

The position Adri most often created imagery from was standing (46%), then sitting (29%) and lying (25%). The predominant perspectives Adri conducted imagery from were as an observer (49%) and

a combined perspective or both (44%). She rarely (7%) used a participant perspective. Since it is suggested that participant or internal perspective imagery is most beneficial, it would have been valuable to try to determine how much of her experience from the 'both' perspective was largely participant. Encouragement to use a participant perspective more often was an important concern.

Under normal circumstances, Adri showed flexibility in attentional styles. When faced with increasing levels of competitive pressure and stress Adri's tendency was to become analytical and evaluative of the situation (broad internal attentional style). The types of mental errors this focus fostered were of the 'paralysis by analysis' nature. In stressful situations, Adri became more reserved and self-oriented and started to focus on her own errors, often moving too slowly (i.e., mentally and emotional particularly) to the next play because of a preoccupation with past play. While over analyzing the situation, relevant external cues were neglected.

When faced with stressful competitive situations, the factors Adri had to contend with were physical tiredness and tension, poor execution of skills, inability to concentrate appropriately, injury, sickness, feelings of loss of control, low confidence, and distractions such as mind wandering to thoughts about school work.

One of the most stressing situations for Adri was not being a starter on the team. This fact alone was not a problem for Adri but rather the way she saw her role at practise and the resultant feelings. As practises became team and tactic oriented, it was made quite apparent who the potential starters were. As a substitute, Adri was stressed about her self-worth, "I feel like I'm just filling space

... I feel kind of useless and wasn't involved in actual defense." Adri was sensitive to her internal processes of thought, feelings, and emotions. As a result, it was difficult not to ruminate over them and get caught focusing on a negative aspect such as her self-worth or performance.

The other factor Adri indicated as being stressful was the coach's approach to leading ... "'personal-style' criticizing ... too much of an air of superiority. Yes she's a superior volleyball player and disciplined athlete, but no one is that superior....If someone criticises my discipline or treats me like a child, I DON'T LIKE IT".

With so much time being dedicated to volleyball, Adri found that when imagery sessions followed practise she was preoccupied with "thinking more of things I had to do that night instead of wanting to participate". The problem was in disciplining herself to establish imagery training as a priority along with the already precedented time, energy, and effort given to volleyball and school. The value Adri found in the imagery program was in pointing out or making her aware of the things she could do to help make things improve. The particular techniques that worked best for Adri were 'basic performance', 'performance review', and 'energization'. The reason she may not have utilized 'cue image relaxation' was because she was proficient at other techniques such as 'ideal model', 'top performance', and 'instant preplay' which allowed her to achieve desired feeling states without having to attempt 'cue image relaxation'.

ALLY

Ally was a first year student uncertain of which academic

discipline she wanted to major in. She decided to enroll in general sciences where she could take a variety of courses to help get some ideas on what area she would most prefer. With a strong background in both basketball and volleyball, Ally was also uncertain of which sport she wanted to pursue at the university level. Once making her decision, Ally committed herself whole-heartedly to the volleyball team in a hard-working, highly-motivated, and determined way.

Although very supportive and positive of fellow players, Ally was extremely demanding of herself. She was an intense individual who approached her training in a conscientious, responsible, dedicated, and persistent manner. When concessions were to be made, it was school that usually suffered.

Much of Ally's frustration was brought on by her intense, self-directed, confrontive, and often negative self-directed feedback. A goal-oriented, committed, and competitive player, Ally was often putting extreme pressure on herself to perform better and better without taking into consideration the good progress she had made. Conservative and reserved in character, Ally had a hard time expressing her frustration and getting help to work through the heavily emotion laden thoughts and feelings she created within herself.

The busy training schedule led to chronic injuries for Ally which left her sidelined for most of the year. This was an extremely frustrating experience for her. She initially had a lot of trouble readjusting goals and was stressed by feelings of falling behind the other players, losing her starting position on the team, and not seeing much progress in injury rehabilitation. To compound matters she started an upper body program because she could not do lower body work

and then her shoulders started to bother her as well.

Ally liked to do things outside of volleyball with the team. At these kinds of functions she did not feel so left out. In these situations, she was an equal part of the team again, not an onlooker. As well, the team members were good friends and the overall relationship was 'special' because it was not like the players had to work really hard for the positive dynamics to occur but it was something natural and fun which evolved, "it sort of just happened".

The overall experience was a trying one for Ally and difficult to enjoy towards the end. During times of increasing levels of pressure or stress, Ally adopted a single-minded focus. It was not surprising to see Ally become very absorbed in her injury problem. Her injury status became her focal point and a source of worry, uncertainty, doubtfulness, confusion, and frustration.

As time went by, she became more reserved and appeared to enjoy the team situation less and less. She had a hard time trying to focus on team activities and possible ways she could contribute to the team. Her enthusiasm and excitement for the team competitions dwindled and she appeared preoccupied with wishing and waiting to be playing herself. This process got her depressed about not being able to play rather than accepting the facts and making the best of it. Ally found comfort and support from Candace and MJ who were going through a similar experience. Together, they helped each other through some difficult times. When they figured other players would not understand, they knew there was someone else around who would,

> Being an injured player was very different from being a player. Practises seemed very long because we sat and watched quite a bit - although we did still train hard in all ways we could. I felt some what separated from everyone, I could not get as excited or disappointed about a match and I could not feel what they were

going through in practise (mentally and physically). Although I was still improving I felt I was being left behind skill wise, that was very frustrating since I was wanting to improve so much that I could make my way back to the starting line up. Candace and MJ were great to have around - I think we helped each other to keep going, to stay motivated.

Table 3: Imagery Utilization Factors and Effectiveness: Ally

Technique	f	Time ave. min/ day	Viewpoint			Position			Sensory Experience							Purpose			Speed			Effect				
			P	O	B	S	ST	L	V	A	T	G	K	S	O	S	A	O	S	N	F	V	Q	A	S	N
Basic Performance	37	9.7	8			4	6	1	7	7	3		1			8	2	2	1	7		1	5	3	3	
Ideal Model	12	6.1		3			3		3	1	2					4			1	3			2	1	1	
Top Performance	1	.33														1							1			
Rt Time/ Rt Place	12	.7	2				1	1	2	2	2		1	1		3			1	1		1	1	1		
Instant Preplay	19	1.9	6			1	5		3	3	2					6				4	1		2		4	
Instant Replay	28	1.8	5			2	3		4	2	1					4	2			5			3	2	1	
Performance Review	22	1.8	5			4		1	4	1	2					4	1	1		5			1	2	3	
'As if'	7	6sec	1					1	1	1	1	1		1		1				1				1		
Relaxation	40	6.8	9			7	3	4	5	4	4			2		5	3	5		9			7	2	4	
Parking	10	1.4	3			1	2	1	1					1		2		1		3			1	1	1	
Energization	5	.25	1				1				1					1				1					1	
Cue Image Relax	6	.65	1						1		1					2		1		1			1	2		
Cue Image Energize	7	1.4	1				1				1					1				1				1		
Total	206	2.96	P= 45 O= 1 B= 0			S= 20 St=25 L= 10			V= 32 A= 25 T= 21 G= 0 K= 4 S= 5 O= 0							S=42 A= 8 O=10			S= 3 N=40 F= 1			V= 2 Q= 23 A= 18 S= 17 N= 0				
Dream	1	1 hr	1					1	1	1	1		1	1		1				1				1		

Ally was one athlete who tried all the imagery techniques. Ally spent on average 3 minutes completing an image. The imagery techniques she used most frequently were 'relaxation' (19%), and 'basic performance' (18%). Other techniques used, although not as predominantly were 'instant replay' (14%), 'performance review' (10%),

and 'instant replay' (9%). She used these techniques most often (70%) for 'sport' related activities.

The imagery checklist allowed athletes to record any other imagery experiences they encountered, if they felt it did not fit appropriately in any of the provided technique descriptions. On one occasion, Ally recorded a very vivid dream experience. In the dream, she was playing volleyball. The next day she felt that the dream had been like a real practise. Mahoney (1977) suggests dream imagery is an important factor separating top level athletes from those who do not succeed. Due to limitations on time and energy of both athletes and consultant, dream imagery was not officially dealt with during this study.

Utilizing imagery techniques always had some kind of influence as Ally never indicated any experiences of total non-effect. Most often, the experiences resulted in 'quite effective' (39%) outcomes. 'Somewhat effective' (30%) and 'adequate' (28%) results were achieved with fairly regular frequency also.

While not expressing having experienced sensory sensations in 'gustatory' and 'olfactory' modalities 'visual' (38%), 'auditory' (27%) and 'tactile' (24%) experiences were predominant sensations for Ally. These experiences were usually imaged at 'normal' speed (91%). One time (2%), she sped up the image and on three occasions, (7%) she slowed the image down. There was no trend or image technique preference indicated by the change of speed of imagery.

Ally preferred to image from the perspective of 'participant' (93%), only on three occasions (7%) did she utilize an 'observer' perspective. While imaging, she usually assumed a 'standing' position

(46%).

Ally felt she was able to benefit from the imagery program. The benefits the program presented for Ally centered around adjusting her thoughts and emotions regarding her injury status and focusing on the types of imagery practise she could use to help her best when she returned. The particular techniques that worked best for Ally were 'basic performance', 'ideal model', 'right time/right place', and 'relaxation'. These techniques allowed her to start to create her own movies based on her past playing experiences and pointers picked up from watching other players perform to generate her own movies. This, she felt helped her learn so much about the technical and tactical aspects of the game. As well, it helped her to relax more and accept her injury for what it meant and be more patient with it, "It helps me relax and enjoy myself more - I can laugh at myself now and not take everything so seriously."

Ally attempted all of the imagery techniques. Some she ended up using more frequently than others. The variability in utilization may be influenced by the timing of presentation of the imagery techniques (i.e., relaxation and basic performance were the techniques first introduced to the athletes so she would have had more time to develop it). As well, personal preferences based on comfortableness, success, and familiarity may have influenced her utilization of imagery.

Bev

Bev was a rookie and one of the youngest members on the team. She was keen to undertake the challenges of volleyball and first year studies as a physical education student. She was an outgoing,

enthusiastic, and friendly individual excited by her new university atmosphere.

Bev was a self-motivated, committed, and hard working individual. The initial months of training were hard on Bev's confidence. Bev was always unsure of her position on the team and whether or not she would be a starter. She worried over this matter quite a bit, which generated self-doubt and loss of confidence. Bev identified factors which affected her confidence. These were feelings of nervousness, pressure, frustration, inappropriate focus, and poor performance.

Another factor influencing Bev's confidence level was the coach's teaching style. She was not familiar with the personally directed criticism expressed by the coach, Kim. "You get sick of it. You get a lot of mental abuse throughout the season and we're expected to learn to cope with it ..." Already insecure because of her rookie status, this manner of feedback further intimidated Bev. She relied heavily on other people's feedback to judge her own improvement as she liked to please authority figures or significant others. She tended to worry a great deal about failure and questioned her own abilities even if objective observers felt her performance was quite adequate. Consequently, Bev took much of what the coach said personally. When this feedback was negative, she felt negative. As the season progressed, Bev received support from the assistant coach and learned to tune out some of Kim's personal criticism.

The average time that an imagery technique was utilized by Bev was 1.4 minutes. 'Ideal model' (13%), 'relaxation' (13%), and 'instant preplay' (13%) were the imagery techniques Bev used most frequently. 'As-if' imagery was the only technique she did not try. 'Relaxation'

and 'ideal model' required the longest time to complete and these averaged out to be 3 minutes and 3.1 minutes respectively. Those techniques requiring the least amount of time to complete were 'cue image energization (.25 minutes) and 'cue image relaxation (.33 minutes).

Table 4: Imagery Utilization Factors and Effectiveness: Bev

Technique	f	Time ave. min/ day	Viewpoint			Position			Sensory Experience							Purpose			Speed			Effect				
			P	O	B	S	ST	L	V	A	T	G	K	S	O	S	A	O	S	N	F	V	Q	A	S	N
Basic Performance	16	1.8			5		5		5	4	1		3			6				5			1	3		
Ideal Model	21	3.1		7			7		8	6			5			8				5			6	1		
Top Performance	16	1.1	1		5		6		6	5			4			7				6			4	1	1	
Rt Time/ Rt Place	9	.4	1		3		4		4	3	1		2			5				4			1	3	1	
Instant Preplay	21	2			7		7		7	5			5			8				7			2	5		
Instant Replay	12	2			5		5		5	3	2		1			5				5		1		4		
Performance Review	12	1			3		3		3	3	1		2			4				3			1	3		
'As if'																										
Relaxation	21	3	2		4	4	3	6	5	5			6			6	2			6			6			
Parking	10	.75	1		2		3	1	2	2			3			3				3		1	2			
Energization	11	.7	1		2		3		2	2			3			4				3		1	3			
Cue Image Relax	3	.33	1			1		1	1	1			1			1	1			1			1	1		
Cue Image Energize	7	.25			2		2		2	1			2			3				2			3			
Total	159	1.4	P= 7 O= 7 B=30			S= 5 St=48 L= 8			V= 50 A= 40 T= 5 G= 0 K= 37 S= 0 O= 0							S=60 A= 3 O= 0			S= 0 N=50 F= 0			V= 3 Q= 30 A= 21 S= 2 N= 0				

Using imagery provided 'quite effective' results 54% of the time. 39% of the time imagery provided 'adequate' outcomes. Bev used imagery largely to enhance 'sporting' pursuits (92%). Bev tended to experience

most imagery exercises through 'visual' (38%), 'auditory' (30%) or 'kinesthetic' sensations (27%). She did not experience 'gustatory', 'olfactory', or 'someothetic' sensations. 100% of the time Bev created images at the same or 'normal' speed at which they occurred in reality. Most of the imagery Bev did was conducted while 'standing' (79%) and from a combined perspective of 'both' participant and observer (71%).

'Ideal model', 'top performance', 'relaxation', 'parking', 'energization', and 'cue image energization' were the techniques most useful for Bev. Her overall feeling about the program was expressed as follows: "The mental training we did was excellent, especially mental imagery. The only quam I'd have would be to have more energizing techniques." Bev's eagerness to become the best player she could become was a strong motivator and influence on her commitment to the imagery training program. This eagerness may have been fostered by her involvement in an earlier study (Crocker, 1988) and her belief in the positive value of mental training.

Candace

Candace lived with her parents in a residential area which was situated quite a distance away from the university. Commuting to and from the university "was a bit of a pain. It took extra time to get to and from school. Plus, when we (the team) travelled, we usually met, or got dropped off at school or in the south side somewhere. This meant more driving and later nights, not to mention gas money."

Right from the start of the season Candace knew that her playing role was as a defensive and serve receive specialist. In a sense, she would be like a 'spark plug'. This was a role well suited for

Candace. She had a steady composure and good self-control. She could bring a confident, calm influence to the court when she substituted from the bench. Her 'go get em' attitude helped provide the court players with energy, support, and direction. Candace attempted to see her role as a chance to prove herself and a challenge to do her best rather than a 'do or die' situation. In this way, she was able to maintain her own confidence. When on the court, she played assertively and with a positive attitude. She looked relaxed, positive, and calm. Her concentration was intense and broad allowing her to be very aware and perceptive on the court. She was able to read both the offense and defense effectively.

Candace was socially outgoing and enjoyed the affiliation and dynamics of group interaction. She extended her on court 'spark plug' role to off the court activities as well. In these circumstances, Candace was a social convener.

Candace spent most of the season injured. Unfortunately, her injuries ended up lingering with her for most of the season forcing Candace to miss over 50% of the league games. Depending on her injury status, there were times throughout the season where even with modified drill activities, there was little Candace could do at practise besides shag balls. In times like these, she felt extremely frustrated and stressed. Candace did not feel useful at practise and thought her time could be better spent doing her studies. However, she was required to continue to attend practises, beyond doing pool workouts and getting physiotherapy treatments.

Candace did not use 'top performance', 'right time/right place', 'as-if', or 'parking' techniques. Those imagery techniques used most

frequently by Candace were 'relaxation' (20%), 'instant preplay' (20%) and 'instant replay' (20%). On average, Candace spent 6.05 minutes utilizing an imagery technique. On average, 'basic perfomance' took the longest for Candace to complete (28.7 minutes). It took the least amount of time for Candace to conduct 'ideal model', 'cue image relaxation', and 'cue image energization', with each of these taking 2 minutes to complete.

Table 5: Imagery Utilization Factors and Effectiveness: Candace

Technique	f	Time ave. min/ day	Viewpoint			Position			Sensory Experience							Purpose			Speed			Effect				
			P	O	B	S	ST	L	V	A	T	G	K	S	O	S	A	O	S	N	F	V	Q	A	S	N
Basic Performance	6	28.7	1		1	1		1	1	1			1	1		2		2		2			4			
Ideal Model	4	2		1		1	1		1							1				1				1		
Top Performance																										
Rt Time/ Rt Place																										
Instant Preplay	11	5	3		1	1	4		3				4	4		5				4		1	4			
Instant Replay	11	2.75	2		2	1	4		3				3	3		5			1	4			3	2		
Performance Review	3	2.3		1		1			1							1				1				1		
'As if'																										
Relaxation	11	4.7	3		1	2		4	3	3	1		2	3		1	1	4	1	3		1	4	1		
Parking																										
Energization	7	5	2			2	2		1	1			1	2				2		2				2		
Cue Image Relax	1	2																1					1			
Cue Image Energize	1	2																1					1			
Total	55	6.05	P=11 O= 2 B= 5			S= 9 St=11 L= 5			V= 13 A= 5 T= 1 G= 0 K= 12 S= 14 O= 0							S= 15 A= 1 O= 10			S= 2 N=17 F= 0			V= 2 Q= 17 A= 7 S= 0 N= 0				

In regards to the degree of effectiveness experienced when using

imagery, Candace found most outcomes (65%) were 'quite effective'. Twenty-seven percent of the time the techniques produced 'adequate' results.

'Someothetic' sensations were the most common sensory experience for Candace (31%). Of similar magnitude were 'visual' (29%) and 'kinesethic' (27%) experiences. She did not experience 'gustatory' or 'olfactory' sensations. Candace created mental images at the speed they 'normally' occur at 89% of the time and 'slowed' down the images 11% of the time (i.e., one time for 'relaxation' and one time for 'instant preplay').

Candace did not appear to develop a predominant imaging position. Instead, she demonstrated an ability to assume either a 'standing', 'sitting', or 'lying' position depending on the desired outcome. While imaging, she 'stood' 44% of the time, while 36% of the time she 'sat' and 20% of the time she was 'lying'. 'Participant' was the most predominant perspective (61%).

She found it tiring to deal with Kim's inconsistant and unpredictable behavior. She never knew quite what to expect, "Sometimes she'd be really strict and bitchy and then sometimes she'd be more patient and less critical." As well, Candace was an outgoing, expressive, and sometimes impulsive character. Quite often, she had to restrain herself to avoid conflict outbursts with the coach.

Candace found that generally the imagery program helped her to relax and energize. The skills she learned to use most effectively were 'instant preplay', 'relaxation', 'basic performance', and 'instant replay'. She felt that the major drawback to the program was "having the mental training at the end of practise made it less effective.

People were tired and just wanting to get home." Prior to taking part in the imagery program Candace appeared to have already developed certain routines and skills that she had learned through previous experience and trial and error. The imagery program simply acted as an avenue to help her more clearly identify these skills and fine tune them. "Overall, this has been an excellent experience for me. I have learned a lot about myself; about other people; and about what it takes to play on a university level team."

Carla

Carla was a definite extrovert and often the center of attention. Carla enjoyed socializing. A big part of Carla's enjoyment of team activities was for the affiliation and socializing. Her 'upbeat' personality was projected through an outgoing, humourous, energetic, and friendly manner. Anyone who was feeling a little down or tired was almost always cheered by spending a few moments with Carla.

Her outgoing nature proved to be a great asset to the team. She was able to break the ice in tense situations and generally attempt to put circumstances in perspective relative to overall existence. At team meetings, she was willing to let other people know how she felt and make comments.

Her outwardness often put her in direct conflict with the coach. Few other players were willing to openly express their thoughts especially when in opposition or questioning of Kim. On occasion, Carla would make anonymous comments in an attempt to make sure player concerns were heard. After being involved in a few run-ins with the coach, she was a bit hesitant to comment as quickly. In her own way,

she was a leader for the team and helped pull players together.

Carla's behavior on the court seemed to be influenced by her level of confidence. When Carla was not feeling confident, she tended to narrow her focus. This led to poor execution, frustration, and nervousness. Fortunately, she was able to keep the parts of her game that she was not confident in from affecting the other parts of her game. For example, she was confident and performed consistently well on serve, serve receive, and back row defence. However, she was not confident with blocking and hitting. She did not allow her front court play to influence backcourt play.

She attributed some of her lack in confidence to her own nervousness and uncertainty. She also pointed out the coach was not including her very much in offensive drills or discussion and did not feel she was given the opportunity to develop front court skills in game situations.

This loss in confidence showed up in her behaviour on the court. During practise, she became much more reserved. At breaks, she would be her boisterous self. In backcourt drills, she was assertive and more communicative. But during frontcourt play, she was very inward directed, tight, and hesitant.

On average, Carla used an imagery technique in 4.9 minutes. Carla appeared to concentrate her energies on using a few techniques a number of times to get skilled at them rather than attempting to try all techniques. Carla had five imagery techniques that she used quite evenly and regularly. They were 'instant preplay' (19%), 'basic performance' (19%), 'instant replay' (16%), 'performance review' (16%), and 'relaxation' (16%). 'Instant preplay' and 'relaxation' were the

techniques that took the longest to utilize, averaging 9.3 and 7.4 minutes respectively. The techniques not utilized by Carla were 'ideal model', 'top performance', 'right time/right place', 'as-if', 'cue image relaxation', and 'cue image energization'.

Table 6: Imagery Utilization Factors and Effectiveness: Carla

Technique	f	Time ave. min/ day	Viewpoint			Position			Sensory Experience							Purpose			Speed			Effect				
			P	O	B	S	ST	L	V	A	T	G	K	S	O	S	A	O	S	N	F	V	Q	A	S	N
Basic Performance	27	5.6			7	7			7		1					7	1			7			2	5	2	
Ideal Model																					1					
Top Performance																										
Rt Time/ Rt Place																										
Instant Preplay	28	2.45		1	5	2	5		7		1		1			8				7			3	5		
Instant Replay	23	9.3		1	4	2	3		5		5					6		1		5			1	5		
Performance Review	23	2.1		2	3	4	1		5	1	1					5				5			1	3		1
'As if'																										
Relaxation	23	7.4	1		6	5	1	1	7	1	2				1	5	2	5		7		4	4			
Parking	13	4.1			3	2	1		3							4	1			3		1	3			
Energization	8	3.5			1		1				1					1		1		1				1	1	
Cue Image Relax																										
Cue Image Energize																										
Total	145	4.9	P= 2 O= 4 B=29			S= 22 St=12 L= 1			V= 34 A= 2 T= 7 G= 0 K= 1 S= 0 O= 1							S=36 A= 5 O= 7			S= 0 N=35 F= 0			V= 5 Q= 14 A= 19 S= 3 N= 1				

Most of her experiences while imaging produced 'adequate' results (45%). Thirty-three percent of the time Carla's experiences resulted with 'quite effective' outcomes. The main reason Carla used imagery was to enhance 'sport' activities (75%). Her sensory experience was

predominantly 'visual' (76%) with some 'tactile' sensations (16%). Every time she tried an imagery technique, she conducted the imagery at 'normal' speeds.

Carla preferred to experience imagery from the combined perspective of observer and participant (83%). To further enhance her utilization of imagery it would be important to look at the combined perspective to see which perspective was most dominant. She preferred the position of sitting (63%). She used a standing position 34% of the time.

Carla used seven of the thirteen imagery techniques. Of these seven techniques, five of them she used quite frequently. Furthermore, the insuing results indicated that she had good success with the imagery techniques she used. In particular relaxation provided very effective outcomes. Because Carla experienced success with the techniques she tried, she may not have felt compelled to attempt any others. As well, the short time period (i.e., six weeks) may not have allowed her the time and energy to try all techniques.

Carla makes the following comment regarding the imagery program, "I learnt a lot and benefited from our mental training especially with regards to the relaxation techniques you taught us. They were very helpful and even now that the season is over I use my relaxation skills often".

Donna

She was a person oriented individual and perceptive of other people's feelings. Her good natured, positive, and enthusiastic personality allowed her to be flexible and accommodating of others. In order to attend universtiy, Donna had to move away from home. The

hectic new life style of combining university academic pursuits and her volleyball training kept her busy so she did not have a lot of time to think about or become homesick. She enjoyed the company of people and liked getting together for social outings.

Donna was excited and challenged by her new life. Academically, she enjoyed her program and was satisfied with her marks. Through volleyball and her courses, she was meeting a lot of new people and making interesting friends. She was initially shy and reserved, but for those who got to know her she was more forward, talkative, and outgoing. Her presence in a group was rather unobtrusive. Donna tended to feel a bit stressed about expressing herself in structured group situations such as team meetings, especially with authority figures present. In smaller groups, she was much more comfortable. When Donna did have something to say, it was usually perceptive and insightful.

Donna was a good team person. She continually worked hard. As a coachable athlete, she was able to take criticism and pick out pertinent information from the feedback given. Prior to joining the team she had well established goals and ideas of what she wanted to get out of her volleyball experience. She was able to watch other players and identify aspects of their play that would be of value for her to copy. Donna had good body awareness and could monitor her own development. This helped her to stay motivated and confident during difficult situations at practise when she was receiving negative feedback. She was able to filter the feedback for constructive elements and put them into perspective of her own development. In this way, she was able to stay focused, in control, and confident.

As a substitute, she was encouraging and supportive of other players. She often hid her own disappointment or frustration to try and keep other players' spirits up. She made a lot of "great friends from the team, especially the rookies." Also through volleyball, Donna met a lot of other people she probably otherwise would not have such as members of the Bears Volleyball Team, the equipment room staff, and friends of other players on the team.

Some of the factors Donna noted as contributing to bad feelings were tiredness (both mental and physical), poor skill execution, not liking a particular drill, jump training, and injuries. Team members were very good at helping her get through trying times.

When first initiating the imagery exercises as a group, Donna experienced feelings of uncertainty, discomfort, and self-consciousness. Donna found that with some of the exercises, there was too much time between prompts. During these pauses, she would finish her image and then her mind would wander or she would start concentrating on other things and miss the rest of the exercise. Occasionally, she would fall asleep. Sometimes, she had trouble recalling what she had experienced during the exercise.

The average time that Donna took to utilize an imagery technique was 3.4 minutes. Parking was the most predominant imagery technique used by Donna. She attempted this technique 28 times which constituted 22% of her utilization of imagery. 'Instant preplay' and 'relaxation', were utilized 16% and 15% of the time. When using 'relaxation' Donna generally took 6.4 minutes to complete the session. While attempting 'right time/right place' imagery, one minute was the time necessary to complete the image. 'Ideal model', and 'as-if' were the imagery

techniques not tried by Donna. Donna was one of two athletes who indicated having a vivid dream that she felt influenced her. The dream occurred the night before a tournament and preplayed part of the upcoming match. She felt this dream was quite effective for preparing her for the match.

Table 7: Imagery Utilization Factors and Effectiveness: Donna

Technique	f	Time ave. min/ day	Viewpoint			Position			Sensory Experience							Purpose			Speed			Effect				
			P	O	B	S	ST	L	V	A	T	G	K	S	O	S	A	O	S	N	F	V	Q	A	S	N
Basic Performance	12	3			3	2		1	2	1	1		3			4				3			3				
Ideal Model																										
Top Performance	5	5	1				1				1					1			1			1				
Rt Time/ Rt Place	1	1														1						1				
Instant Preplay	20	3	2	1	5		8		4	2	2		7			9			8			8	1			
Instant Replay	5	5	1						1				1	1		1						1				
Performance Review	10	1.25			2		2		2				1			2			2			1				
'As if'																										
Relaxation	19	6.4	4		1	2	4		1		2		4	2		4	1		5			4	1			
Parking	28	3.5	8			1	7				1		4	1		8	1		8			9				
Energization	14	5	4				4				4		2			4			4			4				
Cue Image Relax	12	2.2	5				5				3		3	1		6			5			5	1			
Cue Image Energize	3	1.5	1				1				1					2			1			2				
Total	129	3.4	P=26 O= 1 B=11			S= 5 ST=32 L= 1			V= 10 A= 3 T= 15 G= 0 K= 25 S= 5 O= 0							S=42 A= 2 O= 0			S= 1 N=37 F= 0			V= 0 Q= 39 A= 3 S= 0 N= 0				
Dream	1	2 hr	1					1	1	1						1				1			1			

Donna found the imagery techniques to provide 'quite effective' or 'adequate' results. Of these two, 'quite effective' was the more predominant outcome constituting 93% of the total imagery

utilizations. The other 7% of the uses were 'adequate'. Ninety-five percent of the time, Donna used imagery to enhance 'sport' activities. The other 5% of time imagery was used for 'academic' purposes. Donna was predominantly a 'kinesthizer'. 'Kinesthetic' sensations were the most common sensory experience for Donna (43%). The next prevalent sensory experiences were 'tactile' at 26% and 'visual' occurring 17% of the time.

On one occasion (3% of all attempts), Donna attempted to image at a slower rate than would normally happen. This was while attempting 'cue image relaxation'. Ninety-seven percent of the time Donna created images at 'normal' speeds. Her most preferred position to image from was 'standing'. This happened 84% of the time. Her preferred perspective was that of 'participant' (68%). Eleven times she imaged from a combined perspective (26%) and one time she tried the 'observer' perspective only (3%).

As is evidenced by the high percentage of 'quite effective' results, Donna was a proficient user of the imagery techniques she attempted. Donna felt the imagery program helped her to gain confidence. Her clear identification of purpose or awareness of what she wanted from a situation or experience may have directed her toward desired outcomes. It is possible that her involvement in a coping response study (Crocker, 1988) provided her with some experience of using imagery to deal with some of her stressors. Imagery may have been a skill that Donna used 'naturally'.

Julie

Julie was a quiet, reserved individual and not very expressive. She tended to let others talk during team meetings in the hope that what

they said would raise any points she wanted to raise or clarify anything that was not clear to her. However, she would usually comment when specifically asked. She appeared to be more comfortable in small group situations compared to larger groups discussions.

Julie was a very conscientious student who spent most of her free time doing assignments, reading, or whatever else she had to do for homework. She had aspirations to do well at school and was stressed by trying to schedule all her training activities, course work, and homework. This left limited time for herself.

She was generally a consistent and steady performer. She played assertively with those skills that she was confident in (e.g., serve receive, defense, serve) but got frustrated more easily and lost confidence with blocking and hitting skills. In these situations, she often became more tentative and hesitant. Julie was a hard worker on the court, never giving up and always trying to become better.

The average time Julie used an imagery technique was 2.3 minutes. 'Basic performance' was the imagery technique she used most frequently (25%). Julie appeared to try most of the techniques. Behind basic performance, the techniques used less frequently were 'instant preplay' (16%), 'energization' (15%), and 'relaxation' (13%). Julie never utilized 'ideal model' or 'as-if' imagery.

Julie felt her utilization of imagery techniques resulted with 'adequate' effectiveness for the most part (42%). Thirty-one percent (31%) the time the outcomes were 'quite effective'.

Julie used imagery 90% of the time for sporting purposes. She indicated that she experienced images from a 'tactile' orientation most often (33%). 'Visual' sensations were experienced 24% of the time.

'Kinesthetic' experiences occured 16% of the time. Neither 'gustatory' nor 'olfactory' sensations were experienced.

Table 8: Imagery Utilization Factors and Effectiveness: Julie

Technique	f	Time ave. min/ day	Viewpoint			Position			Sensory Experience						Purpose			Speed			Effect				
			P	O	B	S	ST	L	V	A	T	G	K	S	O	S	A	O	S	M	F	V	Q	A	S	N
Basic Performance	31	3.75	2	5	1	7		1	6	2	6		3	1		8				7			3	6	2	
Ideal Model																										
Top Performance	2	5	1	1	1	1			1	1	3		1	1		1				3				2		
Rt Time/ Rt Place	5	1	1			1			1		1					1				1				1		
Instant Preplay	19	2.7	2	1	1	1	3		4	3	4		3	4		5				4			4	1		1
Instant Replay	10	3.5	2				2				2		1	1		3				2				2		1
Performance Review	12	.8	1	1		2			2	1	2	2				2				2		1			1	
'As if'																										
Relaxation	16	1.75	3	1		2		2	2	1	4			2		2		2	1	3			2		1	1
Parking	7	.5	1			1			1		1					1	1			1				1		
Energization	18	5.75	4			4			1		4		2	1		4				4		2	2			
Cue Image Relax	1	.5														1								1		
Cue Image Energize	1	.25														1								1		
Total	122	2.3	P=17 O= 9 B= 3			S= 19 St= 5 L= 3			V= 18 A= 8 T= 27 G= 0 K= 12 S= 9 O= 0							S=29 A= 1 O= 2			S= 1 M=27 F= 0			V= 3 Q=11 A=15 S= 4 N= 3				

In most cases (96%), Julie created mental images at the same speed they occurred in reality. In one instance, when she was doing relaxation, she tried slowing down the imagery. Most of Julie's imaging was done while sitting (70%) and was predominantly from the perspective of a 'participant' (59%). The 'observer' perspective was used 31% of the time.

After evaluating the program Julie found 'instant preplay' to be a very effective skill for her to use. "... serving wasn't great at the begining but after doing mental imagery it seemed to work better!" 'Visual' imagery helped her best to prepare for matches. She felt the imagery program helped her to concentrate better and to gain more control over her emotions. As a skill, she felt imagery would benefit her not only in volleyball but in everyday life.

Karen

As well as being a rookie on the team and trying to adjust to the move from high school classes, to university classes and from high school volleyball, to university level volleyball, Karen also had to adapt to moving away from home. The demanding schedule of both school and volleyball took its toll on health and energy. "I guess maybe being in good shape has its costs". Despite being in the best physical shape she had ever been in, Karen felt susceptible to colds all season. Whenever she had a spare minute to sit still, she wanted to sleep.

At times, practises were tedious because it seemed as though everything she had known or did was wrong and had to be corrected. As a player, she felt helpless and intimidated. She tried to be tolerant of Kim's style of leadership and tried not to take things to personally. However, Karen was an analyzer. Almost to the point of becoming obsessed with whatever she had decided to analyze. As a result, she quite often took Kim's criticism to heart and internalized them which destroyed her confidence and lowered her self-esteem. She found the practises to be an unpleasant experience except for the

comeradery and support that developed with the other players. In coping or accepting the personally directed criticism, Karen felt she had to sacrifice her self-respect and place absolute trust and respect in the coach. This attitude deflated her self-esteem, particularly in the practise situations.

Despite appearing cool-headed and tolerant of some of Kim's feedback behaviours, Karen tended to lose focus of the task and had a tough time getting back on track during a drill. Instead, she became focused on the fear of failure or anticipated negative feedback from Kim. Throughout the season, her emotional control improved slightly and she was able to ignore some of the negative feedback.

She felt her social life was dampened, although she did meet some people from her classes. The team came together quickly and drew support from each other. The other eleven members of the team became special friends, especially the rookies. She enjoyed the company of her teammates and credits their comradery to helping her through some tough times and not quitting the team.

It appeared as though Karen was an athlete who took a few techniques and concentrated on developing them. On average, Karen took 2.5 minutes to use an imagery technique. She most frequently used 'basic performance' (42%) and 'relaxation' (31%). The technique she spent the most time implementing was 'relaxation' at 11.2 minutes per use. 'Right time/right play' required the least amount of time on average to complete (.5 minutes). The imagery techniques Karen did not employ were 'ideal model', 'as-if', 'instant replay', 'cue image relaxation', and 'parking'.

Of the time Karen spent on imagery, she felt that 53% of the time

the results were 'quite effective', and 27% of the time they were 'adequate'. Sixty-three percent of the time she used imagery to try to assist her 'sporting' activities. As well, she attempted to use imagery for 'other ' activities 31% of the time.

Table 9: Imagery Utilization Factors and Effectiveness: Karen

Technique	f	Time ave. min/ day	Viewpoint			Position			Sensory Experience							Purpose			Speed			Effect				
			P	O	B	S	ST	L	V	A	T	G	K	S	O	S	A	O	S	N	F	V	Q	A	S	N
Basic Performance	28	3.5	9	1	1	4	3	6	10	1	9		2	4		11			3	9		6	2	2		
Ideal Model																										
Top Performance	4	1	2				2		1		1		1	1		2				2		1		1		
Rt Time/ Rt Place	4	.5	2				1	1	2		1		2	1		2				2			2			
Instant Preplay	2	1	1				1		1		1					1				1			1			
Instant Replay																										
Performance Review	1	1	1				1		1	1	1		1	1		1				1				1		
'As if'																										
Relaxation	21	11.2	8		1	1	1	6	4	4	4	2	5	4		5	2	5	5	4		2	7	3		
Parking																										
Energization	6	.75	2			2							1	1		1		1	2			1	1			
Cue Image Relax																										
Cue Image Energize	1	1	1			1			1									1	1					1		
Total	67	2.5	P=26 O= 2 B= 2			S= 8 St= 9 L= 13			V= 20 A= 6 T= 17 G= 2 K= 12 S= 12 O= 0							S=23 A= 2 O= 7			S=11 N=19 F= 0			V= 3 Q= 17 A= 9 S= 2 N= 0				

Karen felt she was a strong 'visualizer' experiencing visual sensations 28% of the time. She also experienced 'tactile' sensations 28% of the time. Sixty percent of Karen's images were created at the same speed they would occur in reality and 40% of the time, she

'slowed' them down so she could analyze them better. This was congruent with her analytic nature. Karen most frequently imaged from a lying position 47%, while 27% of the time she would image from a standing or sitting position. Her predominant perspective was that of a participant (90%).

In regard to the imagery program, it appears that Karen had difficulty utilizing the skills outside of the classroom setting. During classroom settings, she could feel relaxed, secure, and confident and as a result, she was able to create positive experiences. On the other hand, in the gymnasium, she became distracted with the coach's behaviour and attitude. She was scared of what the coach was putting the team through and worried about getting through one day to the next. In her opinion, Kim made unnecessary personal attacks and wanted the power to control players. In this setting, Karen, lost self-confidence and self-respect.

Imagery did not seem to help Karen with this predicament. However, she did express satisfaction in the imagery sessions as a distractor from the unpleasantness of practise and enjoyed opportunity to be with the consultant for positive encouragement and support. She found 'relaxation', 'basic performance', and 'instant preplay' to be most valuable. Karen commented that, had the program been extended, she would have been able to develop the skills better.

Lynn

Lynn was an introverted person who tended to be introspective and dwelled on her thoughts, feelings, and actions. This analysis process often focused on negative factors, feelings of pressure, and confusion

and sometimes resulted in impulsive responses. She was open and honest with those indviduals she knew well and felt comfortable around. She did not venture much past her associations with her fellow teammates, with her well established circle of close friends, and with her family.

As an athlete, Lynn had many natural qualities. Her movements were graceful, coordinated, and controlled. Despite a slight, delicate body frame Lynn's quickness, powerful jump, and strong spike earned her the respect of her teammates and other competitors in the Canada West League. Her experience on the court was often relied upon by other team players. Off the court, she was often sought out as a leader as well. Players would seek her advice, opinions, and ideas.

Lynn was very excited and enthusiastic about the 1986-87 season especially after a disappointing 1985-86 season of losses and apathetic attitude. However, as the season progressed she found herself once again unsatisfied and dissappointed with the experience. She was sensitive to criticism and became more and more distracted with the manner and type of feedback directed at herself and at others by the coach. She had trouble creating a more positive experience. She adopted a 'stick it out' attitude. This was her last season and she just had to get through for herself and for the team, then she would not have to put up with any of the hassles.

Lynn was finding volleyball to be a stressor rather than a positive outlet like she had expected. This stress had started to affect her school and social life was well. She often felt tired, frustrated, and confused. She felt as if she had no control over her own life. As well, she suffered from chronic, nagging injuries and found herself at odds with the new coaches leadership style. She gradually lost

motivation in an attempt to deal with conflicts that developed with Kim.

Table 10: Imagery Utilization Factors and Effectiveness: Lynn

Technique	f	Time ave. min/ day	Viewpoint			Position			Sensory Experience							Purpose			Speed			Effect				
			P	O	B	S	ST	L	V	A	T	G	K	S	O	S	A	O	S	N	F	V	Q	A	S	N
Basic Performance	24	3.3	4		4	4	6	4	8	1			6			8	1	3		9			4	4	5	
Ideal Model	5	1	1				1		1							1				1					1	
Top Performance																										
Rt Time/ Rt Place																										
Instant Preplay	23	2.1	3	1	2	1	6		5	1			3			6		1		7			2	3	3	
Instant Replay	5	2.3		3			2	1	3							3				3				1	2	
Performance Review	19	2.5	1	5		5	1	1	5				1			6		1		6				4	1	1
'As if'																										
Relaxation	24	2.1	6		1	1	5	3	3		1		6			5		5		7				4	4	1
Parking																										
Energization	8	1.5	1			1			1				1			1				1				1		
Cue Image Relax	6	1	1				1		1		1					1				1				2		
Cue Image Energize																										
Total	94	2.3	P=16 O=10 B= 7			S= 12 St=22 L= 9			V= 27 A= 2 T= 2 G= 0 K= 17 S= 0 O= 0							S=31 A= 1 O=10			S= 0 N=35 F= 0			V= 0 Q= 6 A= 17 S= 18 N= 2				

Lynn's utilization of an imagery technique took on average 2.3 minutes. All utilization times were very similar regardless of technique. 'Basic performance' took the longest at 3.3 minutes per use. 'Ideal model; and 'cue image relaxation' took the least time at 1 minute. Lynn had four predominant techniques she utilized frequently. They were 'basic performance' (21%), 'relaxation' (21%), 'instant

preplay' (20%), and 'performance review' (19%). Lynn never tried 'top performance', 'right time/right place', or 'cue image energization'. 'Instant preplay' and 'basic performance' were the techniques that Lynn had successful outcomes with.

Lynn's 'stick it out' attitude seemed to show in the resultant use of imagery techniques. Her predominant outcome was 'somewhat effective', which occured 40% of the time. Almost equally as frequent were 'adequate' (37%). She used imagery mostly for 'sport' activities (79%). Lynn did not experience imagery through the sensory modalities of a 'gustatory', 'olfactory' or 'someothestic' nature. Most of her sensory experiences were 'visual' (59%) or 'kinesthetic' (37%).

All of Lynn's imagery was conducted at normal speed. Fifty-five percent of the time, Lynn did her imagery while standing. 29% of the time she would be sitting and 21% of the time Lynn would be lying. Lynn tended to do imagery from the perspective of a participant (47%).

Initially, Lynn found imagery frustrating because she could not seem to image well and this made her feel inadequate. She was not used to doing much self-analysis so felt awkward trying to become aware of herself. She found self-regulation to be a difficult process. As the program progressed, she felt some success with imagery, particularly 'instant preplay', but her effectiveness was still inconsistent. The ineffectiveness and inconsistency may have been influenced by her general apathetic, 'stick it out' approach adopted toward volleyball and her reluctance to 'wholeheartedly' attempt the imagery program:

> This program is very worthwhile, unfortunatly I did not benefit from it nearly as much as I could have due to the fact that I felt I already put in so much time for volleyball, that I was usually too tired to concentrate on our mental training and do the exercises (e.g., mood sheets) wholeheartedly.

MJ

The limited freetime MJ had was scheduled for homework or physiotherapy appointments. MJ liked to have time to herself for reflection. Likeable, friendly, and outgoing with those she knew, MJ may have been viewed by a new acquaintance as shy and unassuming. As she became more comfortable and trusting of the relationship, she assumed a more outgoing perspective. She showed great compassion and concern for her teammates. MJ was team-oriented and unselfish in her attitudes. She was a good team player.

On the court or in team practise situations, she was emotionally quite expressive. When she was not on the court, she was supportive of others. This behaviour was also present on the bench. While on the bench, she could maintain a supportive and positive attitude. If she was feeling down, she did not let on to the other players until later when should would confide in one or two players.

As the season progressed, her role with the team changed when she developed a chronic injury which did not allow her to do much activity with her legs. As a bench player during competition she was required to do some statistical recording. During practise, the nature of the drills dictated what activities she would do. These activities were very limited.

She adapted well to injury once it was diagnosed as chronic (i.e., there were some discouraging moments but for the most part she was able to work through them). She was able to keep a positive outlook. She helped the team as best she could after realizing her physical limitations. She found social and emotional ways that she could contribute,

> ... I learned a lot about my role on the team as an injured person. I had to give to the team as much as I could with what I could do. I did more off the court than on with my support. Sometimes I felt it was my obligation to get water or do whatever else was to be done. After a while, you get so frustrated that you don't want to take any more stats or get water but you know that you should because it's your part as a team member to do what you can.

On average, MJ utilized an imagery technique for 4.6 minutes. 'Relaxation' was the predominant technique which MJ used 33% of the time during imaging. Those imagery techniques also frequently used were 'basic performance' (16%), 'top performance'(16%), and 'performance review' (13%). The three techniques MJ did not use were 'as-if', 'cue image energization', and 'parking'. 'Performance review' (8.2 min.) and 'relaxation' (5.1 min.) were the imagery techniques taking the longest time to complete. 'Instant replay' took 1.5 minutes to complete on average which was the shortest time needed to complete an imagery technique.

When utilizing imagery, MJ found the results were 'quite effective' 46% of the time, and 30% of the time, they were 'adequate'. MJ used imagery to enhance 'sport' 71% of the time and for 'other' aspects of life 24% of the time. She indicated that she experienced 'visual' (35%), 'kinesthetic' (30%), and 'tactile' (24%) sensations most predominantly. She attempted most of the imagery techniques and did so quite frequently. As a result, she was able to get a good feel for the subtleties of the various imagery techniques.

Usually MJ utilized imagery at the speed the activity or situation would occur in reality (85%). She slowed down the images 15% of the time. She usually slowed the images down when attempting 'performance review' and 'cue image relaxation'. The position MJ assumed most often when using imagery was standing (58%). She perceived imagery exercises

most often from a participant's perspective (56%). She experienced imagery from a combined perspective of participant-observer for 27% of the time.

Table 11: Imagery Utilization Factors and Effectiveness: MJ

Technique	f	Time ave. min/ day	Viewpoint P	O	B	Position S	ST	L	Sensory Experience V	A	T	G	K	S	O	Purpose S	A	O	Speed S	N	F	Effect V	Q	A	S	N
Basic Performance	25	5.1	2	1	6	9		1	9		3		8			10				9			1	7	1	
Ideal Model	16	2.8		1	4	5			5		2		5	2		5			1	5			2	1	1	
Top Performance	25	6.1	2	1	5	8		1	8	1	7		8	1		8	3		3	7			6	4	1	
Rt Time/ Rt Place	2	5	1			1			1		1		1			1				1						
Instant Preplay	8	3	2		1	1	1		2				1	1		2	2	1		2		1	4			
Instant Replay	11	1.5	3		1		4		4		1		3			4			1	3				3	1	
Performance Review	20	8.2	5		1	5		1	6	3	5		5	2		2	3	5		5		1	3	5		
'As if'																										
Relaxation	33	10.7	8	1	1	1		10	11	7	10		9	8		2	10	7		9		3	14		1	
Parking																										
Energization	3	5			1	1			1		1			1		1				1		1				
Cue Image Relax	14	1.6	2		1		4		2		3		3			5	1	1	3	1		3	2	1	1	
Cue Image Energize																										
Total	157	4.6	P=25 O= 4 B=21			S= 32 St= 9 L= 13			V= 50 A= 11 T= 33 G= 0 K= 43 S= 15 O= 0							S=41 A=18 O=13			S= 8 N=44 F= 0			V= 9 Q= 32 A= 21 S= 6 N= 0				
Subst.	1	1	1			1			1							1			1					1		

I learned a lot about mental rehearsal and relaxation. You could say that I probably learned the skills more by just watching and going over it again and again in my mind. I did a lot of relaxation and mental training I think a lot differently than the other girls. I did it for skills but I also did it for my mental state. At times, it was hard to just sit there and watch, expecially when I did it for 3 months! The things I did do were more a 'peace of mind' than 'psyching up' for a match or practice. I had to prepare myself over the season for when I could get back to activity.

Sheila

Sheila's time management skills were effective and allowed her to cope with a relatively heavy school load as well as the heavy demands of the volleyball schedule. Sheila was a motivated person who worked hard towards her goals. She was careful to plan her schedule well so she would have some 'sanity time'. During classes, she paid close attention; when she studied, she studied hard, then, when she needed a short break or time to socialize, she enjoyed herself and did not feel too guilty about doing it.

She was an extroverted individual in terms of enjoying the company of others and the feelings of affiliation. Although she enjoyed the group and wanted to be involved in team activities, she did not like to be the centre of attention. Instead, she preferred to be on the edge and able to see the action and join in inconspicuously.

She had a laidback attitude and good natured, happy-go-lucky personality. She was a carefree individual and a good team person. As a first year university player, she was titled a 'rookie'. For a rookie she came into a job of high responsibility when she was designated as the teams setter. Things that stressed Sheila were injuries, confusion on task responsibilities, getting criticized by Kim, tiredness, poor showing on exam, and inconsistent performance or poor performance. As well, feeling rushed, performance nervousness, pressure, lack of discipline in execution of game plan, inappropriate focus of attention, new surroundings, and spectators were factors causing stress for Sheila.

Sheila's average utilization time of an imagery technique was 3.4 minutes. 'Instant preplay' (19%) and 'basic performance' (19%) were

the techniques utilized most often. The longest time period spent at a specific technique was 6.6 minutes for 'instant preplay'. The least amount of time required to complete an imagery technique was 2 seconds for 'energization'. Sheila did not use the following imagery techniques: 'right time/right place', 'as-if', 'cue image relaxation', 'cue image energization'.

Table 12: Imagery Utilization Factors and Effectiveness: Sheila

Technique	f	Time ave. min/ day	Viewpoint			Position			Sensory Experience							Purpose			Speed			Effect				
			P	O	B	S	ST	L	V	A	T	G	K	S	O	S	A	O	S	N	F	V	Q	A	S	N
Basic Performance	32	4.5	6		2	3	6		8	5				7		7		6		8			9	4		
Ideal Model	18	2.2	1	4			4		5					2		4				4				3	1	
Top Performance	7	.25	1		1		2		2					1		2				2			1		1	
Rt Time/ Rt Place																										
Instant Preplay	32	3	8		1	3	7		9		1		1	6		9		3		9			10	2		
Instant Replay	27	6.6	3	1	6	1	7		9				1	5		9		2	1	9			6	5		
Performance Review	24	3.9	2	2	3	4	1	2	6	2				2		4		2	1	6			3	2	1	
'As if'																										
Relaxation	25	3.2	6	1		2	1	5	2	1			3	4		4	3		5	2			3	4	1	
Parking																										
Energization	5	2sec	1				1							1												
Cue Image Relax																										
Cue Image Energize																										
Total	170	3.4	P=28 O= 8 B=13			S= 13 St=29 L= 7			V= 41 A= 8 T= 1 G= 0 K= 5 S= 28 O= 0							S=39 A= 3 O=13			S= 7 N=40 F= 0			V= 0 Q= 32 A= 20 S= 4 N= 0				

The overall predominant effectiveness of imagery was 'quite

effective'. This accounted for about 57% of the imagery utilizations tried. Thirty-six percent of the time, the results were 'adequate'. Most of the time, imagery was used to enhance 'sport' performance (69.%). Using imagery for 'other' purposes such as social activities occured 24% of the time. Only 5% of imagery utilizations were for 'academic' reasons.

The most frequent sensory sensations experienced were 'visual' (49%) and then 'someothetic' (34%). Sheila did not experience 'gustatory' or 'olfactory' sensations during the use of imagery. Sheila created most of her images at 'normal' speed (85%). Fifteen percent (15%) of the time she tried imagery at 'slower' speeds. Generally, slower imagery was used during attempts to relax. 'Standing' was the position Sheila did her imagery most often (59%). The most predominant perspective (57%) was that of a 'participant'.

Because of tough practises which required concentration for three hours, Sheila thought she became more determined and mentally stronger. Relaxation skills helped in volleyball, school, and social situations. She also believes her experience improved her awareness, "I think I'm learning how to better control my emotions and anxiety level on and off the court. I'm more aware of what a big difference positive thinking (about myself and situations) can make in volleyball and life in general."

Tracey

Throughout the season, Tracey was hampered by nagging injuries and sickness. She continually felt run down and as though she was never getting enough sleep. The lack of control and flexibility left her

with the feeling that she could never catch up to school work, to health needs, and to domestic responsibilities. The busy schedule often left Tracey feeling tired, with sore knees and shins, and slow feet. Also, Tracey was left with a general feeling of heaviness, sickness, sense of helplessness, and a lack of motivation.

She enjoyed being with the team because of the support she received from the other players. Tracey felt a lot of the reason she was able to enjoy herself was due to the other players on the team:

> I'm very tired, tired physically and I feel mentally exhausted. I was not happy about my arm action but generally all things went well because the team was supportive'... I enjoy being with the team and can always end up laughing.... For the first time I played on a team that all twelve players made the allowances necessary to get along really well. We all seemed to pull together in the tough times and laugh together in the good times. I made twelve excellent friends that I could rely on when I needed them.

Some of the factors Tracey believed were stressful and upsetting were injuries, bad performance, losing games, being worried or anxious about talking to the coach, being uncertain about Kim's reaction, and having Kim yell at her. For Tracey, these situations generated feelings of frustration, guilt, depression, anxiety, worry, and uncertainty.

Tracey felt she fulfilled the major goal she had set out for herself: "My goals ... to become the best I could be as a player. I am very self-motivated but Kim showed me technically how to do things better and I'm really thankful for that."

The average time that Tracey spent utilizing an imagery technique equalled 2.2 minutes. Tracey attempted eleven different imagery techniques. Of these she did not really have one or two predominant or preferred techniques. Instead, six of them were utilized approximately the same number of times: 'basic performance' (13%), 'performance

review' (12%), 'instant preplay' (12%), 'relaxation' (12%), 'instant replay' (11%), and 'top performance' (10%). 'Relaxation' and 'basic performance' required the longest time to employ (7.7 and 5 minutes respectively). 'Ideal model' and 'cue image energization' required the least amount of time to complete (.36 and .37 minutes respectively). 'Right time/right place', and 'as-if' imagery were the techniques that Tracey did not attempt.

Table 13: Imagery Utilization Factors and Effectiveness: Tracey

Technique	f	Time ave. min/ day	Viewpoint			Position			Sensory Experience							Purpose			Speed			Effect				
			P	O	B	S	ST	L	V	A	T	G	K	S	O	S	A	O	S	N	F	V	Q	A	S	N
Basic Performance	23	5	1		9	2		2	8	3	8		7	5		9			1	9		1	9	1		
Ideal Model	14	.36		1	2	1				3				1		3			1	2				1		1
Top Performance	18	1	1		3	1			4		4		3	2		5				3			4			
Rt Time/ Rt Place																										
Instant Preplay	21	1.6	1	1	3		3		3		2		2	1		5				4			3			
Instant Replay	20	1.5		2	2		1		3		2					6				3		1	4	1		
Performance Review	22	2.25	1	2	3	4		3	4	3	3	1	2	2	1	7			2	3		1	2	2		
'As if'																										
Relaxation	21	7.7	4		3	6		5	7	5	7	1	5	3	1	4	1	0	4	6		6	2			
Parking	11	1.75	3				1		2	3	2	1	1	1	1	1	1		1	1			2			
Energization	14	.8			1				2	2	3		1			2	1		1	1			1	2		
Cue Image Relax	10	1.6	2		1	1		2	3	2	3	1	2	1	1	2	1	2	1	1		3	2			
Cue Image Energize	6	.37			1	1					1					2			1					1		
Total 180		2.2	P=13 O= 6 B=28			S= 16 St= 3 L= 12			V= 39 A= 18 T= 35 G= 4 K= 23 S= 16 O= 4							S=51 A= 4 O=10			S=12 N=33 F= 0			V= 13 Q= 29 A= 8 S= 0 N= 1				

Tracey felt that 58% of the time the imagery technique she employed

was 'quite effective'. Twenty-four percent of the time it was 'very effective'. Tracey's utilization of imagery techniques was largely to enhance 'sporting' aspects of her life (77%). The sensory experience accompanied by the utilization of imagery techniques was largely 'visual' (28%) or 'tactile' (25%). When creating an image, Tracey preferred to experience the image at the same speed it would occur in the actual situation (74%). Occasionally (26%), she would slow the image slightly, usually for 'relaxation' imagery.

Tracey seemed to be flexible in the position she assumed while imaging. A slightly greater percentage of her images were attempted while standing (46%), as compared to 29% while sitting or 25% while lying down. The perspective Tracey most often perceived the imagery experience from was almost equally divided between the 'observer' only perspective (49%) and the combined perspective of both participant and observer (44%). To further enhance her imagery skills Tracey could be encouraged to attempt more imagery from the participant 'perspective'.

With the imagery sessions being conducted after a full day of classes and a three hour practise, Tracey ran into the problem of either falling asleep or feeling quite drowsy during the exercises. At times her mind would wander to homework or she would not be able to fully complete the image at the pace being set by the guided image. She found using 'basic performance' on her own time when she was not as tired or could set her own pace worked well

> My performance was enhanced so much because of my ability to mentally rehearse etc. I never could do that before this season and I'm really glad that it was included into our program. Psychologically I think I became more steady as a player. Getting blocked or shanking a pass never got me down and I could relax and refocus. This is so beneficial ... I felt the season was a growing experience.

Tracey felt having been through the imagery program was a valuable experience. The aspects it contributed to the most were those of mental and emotional control. By using her new learned skills she could more easily create the desired feelings and attentional focus to allow her to capitalize on her physical potential. Tracey became very proficient at utilizing the 'relaxation' skills and 'basic performance' imagery. To employ imagery Tracey concentrated on sport related factors, preferred imaging at normal speed, while standing, and from the observer-participant perspective. The experience was usually accompanied by visual and tactile sensations and the results were quite effective.

F. Group Trends

Although many idiosyncrasies were identified throughout the study, there were some characteristics common among most athletes as well. In regards to the SMI and the Mental Imagery Checklist, sensory experiences in the olfactory and gustatory modalities were rare and imaging ability (i.e., vividness and controllability) were low. Visual and kinesthetic experiences were more controlled and vivid and experienced more often.

TAIS profiles in general were quite varied. However, the attentional scales showed a tendency for most athletes to narrow their focus of attention and miss relevant cues when confronted with stressful situations. As well, the sub scale often used to measure physical activity levels were average for all athletes. Given the

amount of training, the competitive schedule, and the fact that a lot of players were also taking activity courses in their academic pursuits, the sport consultant had expected this score to be higher than average. This scale may have been influenced by the energy level or fatigued feeling the players were experiencing.

The common comment on the script evaluations was concerned with the tiredness and fatigue the players were experiencing. To stay focused and concentrated on the imagery classroom sessions was hard after a full day of classes and training. Some athletes admitted to falling asleep during the sessions, and others indicated having difficulty to keep from thinking about all the homework to be done, or planning the evening and next day activities.

The group trend that emerged from the OPS inventories was an inconsistency in OPS scores that fluctuated more during the first half of the study. In comparison scores during the last half of the study fluctuated less and around a relatively higher score than first half scores. The factors that most frequently were indicated as affecting their OPS levels were execution of skills and feedback from the coach (e.g., when performance was good OPS higher than when performance was perceived as poor, when feedback was positive OPS was higher than when feedback was poor).

Individual averages for the mood ratings obtained from the mood sheets varies slightly. However, poor performance execution and negative feedback from the coach were commonly reported as factors influencing mood to drop, while good execution and fun warm-ups or drills made mood more positive.

G. Summary

This chapter served to discuss the quantitative and qualitative data generated in the study. The main areas of consideration were: the evolved roles and the acceptance of the team sport consultant; the stressors, processes, and relationships causing strain for the participants; the acceptance, utilization, and effectiveness of the imagery training program; and the evaluation of the imagery training implementation process.

The acceptance of the sport consultant was fostered by a number of factors. A demonstration of knowledge regarding mental training was one such factor repeatedly acknowledged by participants. Beyond feeling comfortable with the consultant's credibility and ability to provide worthwhile services, the other factors contributing to the acceptance of the consultant centered around her ability to 'fit in with the team'. General personality characteristics were frequently identified, such as: 'easy to relate to', 'flexible', 'collaborative', 'cooperative', 'positive', 'constructive', 'trustworthy', 'created informal, relaxed and open atmosphere', 'cared about each individual', 'presented relevant ideas', 'sincere', 'encouraging', 'enthusiastic', and 'committed'.

Another factor which may have influenced the players' acceptance of the consultant was the contrast in personality between Kim and Lee. Lee was concerned for the athlete's mental well being and did not have to worry much about things such as program results or disciplining athletes. Lee was in a situation where she could provide support, encouragement, and alternative action plans for certain circumstances. In comparison, the coach created a role where she assumed the

responsibility of disciplining, controlling, and correcting athlete behavior.

To implement the program, the consultant was faced with filling several roles which served different needs. These roles included: teacher, optimizer, program consultant, counselor, intermediary, and observer-analyzer. The implications these roles play in the future development of sport consultants centered around clarification of the specific responsibilies included in each role and identification of where priorities should lie. The specific priorities identified in this study as being significant considerations for developing future sport consultants were: her knowledge regarding mental training (i.e., imagery), knowledge regarding the sport (i.e., volleyball), ability to create an atmosphere where athletes felt comfortable, personality or charateristics which allowed her to fit in with the team, and level of commitment.

The stressful factors, processes, and relationships which existed for the participants were numerous. These can be categorized into areas of sport, school, communication, and domestic responsibilities. Within each category, there were a number of specific stressors arising. Within sport these included: fatigue, injury, external distractions, internal distractions, performance outcome, fear, unfamiliarity with position or responsibility, playing status, and pressure. As a result, athletes had difficulty concentrating appropriately, performed poorly, were not motivated appropriately, were afraid to make errors, and lost confidence. The feelings these stressors created were discomfort, fear, embarrassment, feeling rushed, panic, loss of control, indecision, worry, nervousness, and feeling

pressured.

School stressors included: homework, exams, grades, and classes. Many of the problems generated by these stressors centered around the issue of time management. Each player had obtained good marks before and knew she was capable of achieving good university grades. The stress surrounding school was created by the attempt to schedule both academic pursuits with the extreme time and effort demands expected from the volleyball program. When a player received a mark less than what was expected, she attributed it to not having the time to put in the necessary effort to get the marks she was capable of.

Communication stressors revolved mainly around coach-player and coach-team relationships. Players did not feel comfortable approaching the coach because: they felt intimidated; they were afraid the coach would yell at them. The coach had the authority and final say about decisons regarding the team and players were unsure of how she would react and what action she would take if they approached her. In addition, they did not think she would listen to what they had to say.

Within domestic responsibilities, the main stressors were: expectations (i.e., of school, of volleyball, of people, of university life), health status, feelings of self-worth, and limitations on social activity. Players were stressed when expectations and actual occurrance were not congruent. In some instances, players were able to adjust or deal with certain circumstances to allow goals to be satisfied. Unfortunately, in some situations adjustments were not made but instead circumstances were tolerated. This led to individual dissatisfaction because the original goals or expectations were still desired but unattainable. This left athletes feeling disappointed,

guilty, frustrated, and confused.

Acceptance of the imagery program was high. This seemed to be fostered by the coach's positive and supportive attitude toward mental training. As well, the players were at a high level of development and consequently, they were interested in exploring ways to improve themselves. Lee's positive, enthusiastic, and encouraging attitude also helped market the program and dissolve resistance and hesitancy.

The tables indicated that generally:

1) The most frequently utilized imagery techniques were 'basic performance', 'relaxation', 'performance review', 'top performance', 'instant replay', and 'instant preplay'. These were the same techniques that generated the best results.

The techniques not attempted often were 'ideal model', 'right time/right place', 'as-if', 'parking', 'energization', 'cue image relaxation', and 'cue image energization'. For some individuals, these were also ranked slightly lower in regards to effectiveness, however, this is difficult to compare to successful technique because utilization frequency is so varied. Most athletes did express difficulty in using 'parking' and 'energization'. The problems athletes may have run into that influenced utilization of the seven less frequently used techniques were: the time required to develop and refine a technique may vary (e.g., 'cue image relaxation' may take longer to develop than 'relaxation'), the possibility of other conditions interfering with or hindering an individual's ability to utilize a technique (e.g., energizing would be difficult to achieve when athletes are in a state of overtraining). Furthermore, the purpose for utilizing an imagery technique may be accompanied by more

heavily emotionally-laden feelings than a technique used for a different purpose (e.g., 'parking' was used to deal with the coach's attacks on player self-worth and self-esteem which was associated with strong emotional feelings, while 'instant preplay' was used to focus on accurate serving and tended not to be associated with as strong emotional feelings).

This suggests, and is supported by the literature (Orlick, 1989), that a practise effect is very critical in developing imagery skills. The time taken to develop and refine an imagery technique varies between techniques and between individuals.

The trend among players showed that 'basic performance' and 'relaxation' were the techniques that took the longest time to complete. Most athletes did not utilize 'right time/right place' or 'as-if' imagery. 'As-if' imagery was likely not used very often because it was not officially presented to the participants. 'As-if' imagery was intended to be the last technique presented to the players. When the three week introductory period proved to be too short a time to adequately present all the techniques, 'as-if' and 'substitution' imagery were not presented.

'Right time/right place' was a technique presented towards the end of the three week introductory period. By this time, athletes may have already established techniques which they preferred to use. Although not presented to the athletes as an imagery technique, dream imagery was utilized by two athletes and may be an important consideration for future research.

2) A majority of the players (9) found using imagery techniques to be a 'quite effective' means for generating desired outcomes. Those

having more difficulty generating desired outcomes may have been the result of an apathetic attitude toward volleyball in general, or to a more critical analysis of the experience.

3) Imagery techniques were used mainly for sport purposes. There was little transfer of imagery utilization from the sport environment to the school environment. There was some utilization of imagery for other (i.e., usually social) purposes, however, this was still minimal.

4) Imagery can be experienced through a number of different sensory modalities. Overall 'visual' sensations were the most common experience. 'Kinesthetic' experiences were the next frequently experienced sense, followed by 'tactile', 'someothetic', and 'auditory'. 'Gustatory' and 'olfactory' were sensory modalities experienced by only a few athletes (3) and these sensations were experienced only a few times, (i.e., one individual experienced gustatory sensations once, one individual experienced olfactory sensations once, and one individual experienced gustatory and olfactory four times each). This may suggest that 'gustatory' and 'olfactory' sensations were not significant experiences in volleyball situations or that these sensations were difficult for the athlete to become consciously aware of.

5) Imagery was conducted most often at normal speeds. The advantage of this approach is the rehearsal more closely simulates the actual performance desired. Some players attempted to slow down imagery during relaxation. This may have been to make situations or circumstances seem less busy and more manageable.

6) For most of the group, imagery was conducted while players were standing. This may have been an indication that the imagery techniques

were being used during the practise sessions or in the actual gymnasium environment. However, this is just an inference because the tabled data doesn't provide enough detail to indicate if a 'sporting purpose' occurred in the gymnasium or elsewhere.

7) Experiencing imagery as a participant was the most common perspective. This is valuable because then the athlete is most closely simulating the experience as if she were actually performing the skill. Athletes experiencing imagery from the participant-observer perspective was also frequently utilized.

Group trends or tendencies did occur. SMI results suggest olfactory and gustatory sensations may not be strong sensory experiences for women volleyball players. In stressful situations, the TAIS suggested most players will tend to focus narrowly, missing important relevant cues. Both the OPS scores and mood ratings were influenced by performance execution outcomes and the type of feedback received from the coach. Finally, most athletes felt that the imagery classroom sessions would have been more beneficial if held earlier in the day in order to avoid some of the fatigue problems experienced with having the sessions at the end of practise and the end of the day.

V. CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

A. Introduction

The purpose of this study was to observe and describe the implementation, utilization, and effectiveness of an imagery skills training program provided by an 'in-house' sport consultant on a competitive women's volleyball team preparation. A single subject case study design was used to present individual differences. Self-report measures, interviews, and participant-observation information provided further insights with respect for the various patterns emerging in the data.

B. Conclusions

Given the current direction of competitive sport preparation, it appears that sport psychology is a growing discipline. The sport consultant plays an important role in developing a more complete, elite athlete who functions physically and mentally well.

The evolved roles of the team sport consultant had subtly different responsibilities. Throughout the duration of the study, Lee, assumed six roles: teacher, optimizer, consultant, observer and analyzer, counselor, and intermediary. The responsibilities included: the transmission of psychological knowledge; the provision of experiential exercises to explore psychological knowledge; the individualization of programs for each athlete; the facilitation of learning of the techniques; the provision of advice regarding program conduct; the identification of external factors and the social milieu regarding their influence on the participants; the assistance with conflict

management and stress management situations; and the assistance with interpersonal communication problems.

The beginning and ending point of any of these roles and responsibilities were not clear cut. Rather, there was an integration of roles and responsibilities that accommodated the needs of the participants. In some instances, the consultant would essentially be acting using the responsibilities of more than one role.

In her position as consultant, Lee, was quickly accepted by the participants. This acceptance was fostered by: her knowledge of mental training (i.e., imagery), her knowledge of sport (i.e., volleyball), the atmosphere she was able to create which allowed athletes to feel comfortable, her personality and character which helped her fit in with the team, and her committment to the participants and the program. Acceptance of the consultant had an impact on the imagery program and her role. Because Lee displayed qualities respected by the athletes, the athletes were more inclined to commit time, energy, and effort to imagery training. As well, the ensuing relationship influenced the roles (ie., the type of services) the athletes felt comfortable requesting from Lee. Further, the loyalities shared between Lee and the players encouraged a positive working environment.

The four main areas causing stress for the participants were: volleyball, school, communication, and domestic responsibilities. Within volleyball, the main factors causing stress were fatigue, external distractions, internal distractions, performance outcome, unfamiliarity with position or responsibility, playing status, and pressure. School stressors included class attendance and participation, homework, exams, and grades. Communication stress

revolved around coach-player and coach-team conflicts. Domestic responsibilities included expectations, health status, self-worth, and limitations on social activities. Each area contributed to the overall stress experienced by the participants.

The imagery program was generally well accepted by the participants. Factors influencing this acceptance were: the coach's positive support and attitude toward mental training; the highly motivated and competitive nature of the players and their desire to develop into the best players they could be; and the consultant's enthusiasm for presenting the material.

The successful techniques included: 'relaxation', 'basic performance', 'instant preplay', 'performance review', 'top performance', and 'instant replay'. The techniques that players had more trouble implementing were: 'ideal model', 'right time/right place', 'as-if', 'parking', 'energization', 'cue image relaxation', and 'cue image energization'. The successful techniques were more easily managed by the athletes because the emotions involved tended to be lighter. As well, if a particular technique worked well for an athlete, she tended to continue to use it. By virtue of using one technique more than another, the athlete became more masterful at using it. For those techniques the athletes did not find as successful, the problem being dealt with appeared to be more emotionally-laden. As well, these techniques appeared to be more frustrating for athletes to use because they did not feel they could do the technique.

The main factors influencing the athlete's ability to effectively utilize these techniques were: the time period over which the techniques could be practised, explored, and developed; the order the

techniques were presented to the athlete; the athlete's attitude or approach regarding the imagery program; the level of emotion associated with why an athlete chose to use a particular technique; the time of day during which the imagery technique was attempted; the nature of different techniques which influenced the time required to develop it; the number of stresses or distractions faced by the student-athlete at the same time, each calling for time, energy, and effort from the athlete; the number of times a technique was attempted; the leadership style of the coach; and the consultant's attitude and approach used to present the technique.

An evaluation of the intervention process and imagery utilization sought to identify factors that contributed to the effectiveness and practicality of using imagery training for competitive sport preparation. The factors that appeared to foster effectiveness were: the use of 'chalk-talk' or mini lectures for presentation of theory; the allowance of a learning and adaptation period for athletes to become comfortable with self-initiated imagery; and the guided exploration of imagery techniques in progressively more game simulated situation. The application of imagery techniques was transferable from classroom to gymnasium. For some individuals this process was more efficient than others. Individualization of programs helped to identify the factors influencing this difference in transferability.

The potential effectiveness of the process may have been limited during the second phase of the program. After the completion of this stage, the athletes expressed satisfaction in having had the opportunity to use imagery techniques in actual practise and competition situations. However, the general consensus indicated the

three week time period was not long enough to become proficient with the technique. This suggests the effects of the imagery training may not occur until a later time. At that point, assimilation of what was learned and experienced will be more ingrained. Further, because imagery largely influences, initially, non-overt processes, such as thought and emotions, it may take a longer time for overt beahviours to indicate that change has taken place.

In terms of practicality, the overall methodology used in this study, was not appropriate for general utilization. The 'in-house' commitment by the consultant would rarely be available to teams, even at the elite levels. Both time and finances would make it a nearly impossible venture.

Although the overall methodology may not be practical, certain aspects of the process appear to have potential practical applications. Those aspects are: the learning progressions; the utilization of both group and individual sessions; the regular involvement of the consultant versus a 'one-shot' presentation; and a modification of the consultant's involvment.

C. Implications

The methodology followed in this study was premised by an assumption. Underlying the use of imagery as treatment variable was the assumption that this was an appropriate skill for all subjects to use for dealing with stress in sport. It is possible, and highly likely, that alternative treatments would have been more applicable to particular player needs.

The field study nature of this research was a mixture of

qualitative and quantitative data. These multi-method data provide further understanding of the intricate interrelationships between an individual's cognitive, physiological, and behavioural functioning and supplements the objective data. No attempt was made to determine the amount of change in physical skill performance occurred as a result of the treatment. Rather, the results were concerned with the athlete's self-perceived ability to use the treatment (i.e., imagery techniques), and mental and emotional benefits resulting such as increasing levels of confidence and concentration.

The analysis and interpretation of the data in this study addressed many concerns faced by today's sport consultant. Perhaps the most perplexing consideration of any sport consultant surrounds the nature of her involvement. The results suggest that the consultant must carefully identify how she plans to be involved with the group and clearly define the roles and responsibilities she will undertake during this involvement.

The acceptance of mental training can occur in both cognitive and behavioural dimensions. Specifically, an individual should not only be supportive of mental imagery on a theoretical and philosophical level, but also in actual behaviour and practise. When incongruencies develop, for example, athletes and coaches are accepting of using a mental training program verbally, but in their actual implementation and utilization, they do not show an equal acceptance of the necessary time, effort, and energy required to incorporate the treatment.

The results of the data in this study revealed that leadership style is an important consideration influencing not only the athletes acceptance of a mental training program and a team sport consultant,

but as well, the athlete's ability to use the skill effectively. A coach who leads in an autocratic, controlling manner and inflicts limitations, conditional approval, and expectations upon athletes appears to cause stress and strain in her athletes. This in turn, is restricting on the athlete's ability to use the imagery techniques effectively. In this predicament, the athletes may learn the technical and tactical aspects of the game, but suffer losses of self-worth, self-responsibility, and self-respect.

The implication this has for the consultant concerns whether or not the consultant should try to direct the coach's style toward an approach that theoretically is more acceptable in today's society. Ideally, a coach is perceived as someone who is oriented toward developing self-responsibility and self-control. This is achieved through support and the building of an environment which fosters self-esteem, positive regard, acceptance of self, and stimulation of growth. Athletes feel free to express fears, doubts, and inhibitions along with dreams and goals. The sport consultant must decide on the type and manner of influence she will project onto a coach who goes against this model.

For an athlete to fulfill her potential, she can not be inhibited by negative, stressful circumstances which impinge on her ability to control her time, energy, thoughts, emotions, and behaviours. To best help an athlete deal with the processes and relationships that act as stresses, the sport consultant must be sensitive to the best ratio of individual counselling to group session counselling. An integration of both approaches appears to warrant further investigation.

The case study design addressed the various characteristics of the

athletes. A sport consultant is in a position to accommodate these unique traits and assist the athlete in developing her emotional and mental control through the application of imagery training. The effectiveness of the skill development and its transfer to the practise situation depends on the sport consultant's ability to educate the athlete regarding how the skill can help her, to what extent can the skill help her, when can the skill be used to help her, and how can the skill be refined, and developed.

Overall, team sport consultants can provide experiences which benefit student-athletes as athletes, as students, and as individuals. Through efforts to understand their athletes as individuals who have different characteristics and personal needs a sport consultant can help provide the most suitable opportunities for them to develop mental and emotional control. Sport consulting is the facilitation of mental and emotional control and requires effective communication with all the parties involved.

D. Recommendations

The following recommendations were made for future research in the area that deals with developing psychological skills for competitive sport preparation.

1. The case study design used to observe the natural field setting can be used to provide a deeper understanding of the participants. Not only can individual differences be highlighted, but the key forces found in the natural setting, affecting the individual, can be uncovered. Complex interrelationships between these forces can be investigated and, in turn this can contribute to more knowledge about

the natural setting.

2. There is a need to refine mental training packages which are 'practical', 'useful', and 'highly individual'. To be 'practical' requires the development of the necessary mental skills without constant input by a consultant or sport psychologist. Potential consulting methods need to be explored more fully.

3. More investigation dealing with the presentation of mental training skills to sport teams is needed. Often the individual aspect is minimized because of the cost-benefit ratio of utilizing group presentation. The best way to capitalize on individualization within the team needs to be addressed.

4. Further development of methodological techniques that can be used for monitoring and assessing psychological skills need to be developed.

5. The comparison of other psychological skills that athletes may use to deal with stress will help identify which skill, in which situation, proves to be better for a specific athlete.

6. The application of imagery training to male athletes and to different sports will allow for assessment of congruency with this study, and the potential generalizability of results.

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APPENDIX A

Mental Imagery Techniques

Mental Imagery Checklist

Imagery Checklist Category Explanations

Mental Imagery Techniques

Basic Performance: This is a general rehearsal technique. It can be used to rehearse any experience you wish. It is good to use both imagery that involves experiencing the exercise from the perspective of participant and observer.

Ideal Model: In situations when you can't experience yourself executing successfully or can't create any image at all ideal model imagery is useful. It is important to pick someone whose style is complimentary to your own. You may try to choose someone of much the same height and weight as yourself.

Top Performance: You may use this technique to generate sensory sensations present when you have a top performance. You need to identigy a skill you know you have performed perfectly in the past. You may notice some basic differences between this perforance and our present performance. This type of comparison provides a clue or clues to possible factors that may enhance your performance.

Right time/Right place: This type of imagery is designed to put you in touch with feelings generated when performance is at an optimal level. It is important to quiet your mind and emotions so no in appropriate feelings interfer with the exercise.

Substitution: If you are having trouble rehearsing a skill and find yourself focusing on the very errors you are trying to eliminate you may wish to try substitution rehearsal. In this type of imagery you image yourself performing a different skill in a different situation perfectly, gradually make a transition until you vcan experience yourself performing competently and successfully the problem or desired skill.

As if ...: This type of imagery doesn't require withdrawl from your environment. This imagery is identified with the notion of 'acting as if' you were someone or something else, i.e., while spiking you imagine you are able to hit like a sledge hammer. Images and symbols can evoke feelings which may be hard to express but create within the athlete a desired quality of performance.

Instant Preplay: Instant preplay is used as a 'priming pump'. This type of imagery 'facilitates the shift from abstract thinking to doing by initiating 'thought' in you body's language: the language of seeing, feeling, hearing, smelling and tastin," (Syer & Connolly, 1984), i.e., After scoring a point or winning a rally a quick preplay of your serve will help bring your focus back to the task at hand and prepare your body for action.

Instant Replay: This is the review of an action you just performed. Generally this is used to imprint a perfect action more deeply or to review a poor performance to access necessary changes. Instant replay can lead into an instant preplay.

Performance Review: Instead of doing a verbal analysis of performance an imagery one can be done. This may lead to discovery to new information and insights regarding your performance. Usually this exercise it sone some period of time after the event so you will not be as inclined to censor mistakes or exaggerate strenghts. Information gathered through this technique may be concerned with your performance as a whole or on specific aspects.

Cue Images: Certain images are capable of evoking particular qualities in athletes. It is best when the image arises naturally from the athletes experiences. It is often a good idea to identify more than one cue image for a particualr purpose so in situations that arise where the initial cue doesn't work an alternative one is available.

Energizing: Energizing is a process of rejuvenating and cleansing your mind and body. When your arousal level is below your optimal performance point, do to tiredness, lack of motivation, etc., this technique can help elevate you to the desired level.

Parking: This technique allows you to put aside any distractions. It is important to utilize all your energies, physical, mental, and emotional, toward your performance and parking can help you do this.

MENTAL IMAGERY CHECKLIST

Name: _____
Date: _____

Technique	Time	View-point	Sense	Position	Speed	Application (purpose)	Result
Basic performance							
Ideal performance							
Top performance							
Right place/ right time							
Instant preplay							
Instant replay							
Performance review							
'as if'							
Relaxation							
Parking							
Energizing							
Cue image (relaxation)							
Cue image (energize)							

Comments:

Category terms and abbreviations

Time: the average daily practise time in minutes. Take the number of minutes each day that you utilized a particular technique and divide by the number of days (e.g., day 1-12 min., day 2-17 min., day 3-11 min. for a total time of 40 minutes/3 days-13.3 minutes a day.

Viewpoint: the perspective from which the subject experiences the imagery exercise. Abbreviations are:

- P-participant perspective
- O-observer perspective
- B-both perspectives

Senses: the sensory sensations experienced by the subject while doing the exercise. Abbreviations are:

- S-see/visual
- H-hear/auditory
- O-smell/olfactory
- F-feel/touch
- T-taste/gustatory
- K-kineasthetic
- P-someothetic

Position: the positions the subject assumed while going through the imagery exercise. Abbreviations are:

- S-sitting
- St-standing
- L-lying

Speed: refers to the speed at which the image was conducted at. Abbreviations are:

- S-slower
- N-normal
- F-faster

Application: refers to the aspect of their life that the subject attempted to use imagery for inorder to bring about some kind of change. Abbreviations are:

- S-sport
- A-academics
- So-social
- O-others

Effect: the subjects feeling regarding how effectively she felt she was able to use the particualr imagery technique to obtain her desired result. Abbreviations were:

- NE-not effective
- SE-somewhat effective
- A-adequate
- QE-quite effective
- VE-very effective

APPENDIX B

Imagery Script Example

Imagery Script Evaluation Example

Imagery Script Discussion Example

Basic Performance Practise Exercise

Sit down in a place where you will not be disturbed. Uncross your legs and arms. Close your eyes and relax from you head downwards. Breath in relaxation, exhale tension...in and out...feel calm and peaceful.

See yourself in a place where you can practise your serve that you want to improve. Create as real and genuine a a scene as possible. Where is it? How high is the ceiling? What sort of lighting is there? Can you hear ventilation fans? Are people watching? What colors do you see? What clothes are people wearing? What smells are there? What sounds do you hear? See and sense as much detail as possible.

As you image, you experience yourself walk into the picture and begin to prepare for practise. Notice what equipment you have brought with you. How do you prepare yourself to perform? Carefully experience your pre paration...

Now you begin to practise the skill. Notice particularly those critical factors which are the cutting edge of your ability and which you are going to improve. Experience yourself performing well. Where do you initiate the serve? How is your balance? How do you use your arms and head? How do you use your legs? Your hips? Notice as much detail as possible.

Now go back to the begining. Take a moment to settle down...Experience yourself perform the serve once more, aware of all its detail. Then stop...Take a deep breath, letting it out slowly... as you go back to your image, change your position so that you can experience the same scene from somewhere else - from a different side, closer or further away.

From this new vantage point, watch the same performance. Notice as many good elements as possible. Don't force it but coax the image from your memory. If part of the image is vague don't worry. If it is clear, notice what new insights you get by watching from this angle. If the action is brief, play it through a couple more times...

Now come back to the room and without opening your eyes take another deep breath. As you let it out slowly, let yourself release any new or remaining tension before returning to your image.

This time, as you begin your performance, focus your attention on one of your hands. Image closely...and you realize that you are now watching from inside your body and you can feel yourself complete the movement. Before starting again, take a moment to feel your surroundings. Notice the touch of your clothes. Notice what parts of your body seem most alive. Look around. What do you see? What objects and colors do you notice? What sounds do you hear? What can you smell?

Now prepare to practise the skill again and as you move be aware of all the sensaions and feelings you identify with a perfect action. Notice how good it feels. Again, if your actions is brief, repeat it a couple of times...

Finally, after another moments relaxation, repeat the action with your awareness focused on one element of the movement. This might be a part of your technique which you have identified as having difficulty with recently or a specific area of the body that needs attention. Notice how this element of the movement or part of the body functions when your perform with the grace and ease of your image. Let yourself

enjoy the sense of integration as you run through the movement once more.

Before you end the exercise, let you attention expand again into your whole body so that you are as conscious as possible of how you feel. Notice that the end product flows from the sensation of performing the activity efficiently and gracefully. When you are ready open your eyes.

**The basic performance script, evaluation and discussion forms presented in this appendix are samples of the exploration exercises used in the study. More details regarding specific scripts used in the study can be obtained by writing the author: Debra Lee Covey Box 1364 Jasper, Alberta T0E 1E0. Further references used to write the scripts and evaluations were:

Everly, G.S., & Rosenfeld, R. (1981). The nature and treatment of the stress response. New York: Plenum Press.

Hendricks, G., & Wills, R. (1975). The centering book: Awareness activities for children, parents, and teachers. Englewood Cliffs, New Jersey: Prentice-Hall, Inc.

Peper, E., & Williams, E.A. (1981). From the inside out. New York: Plenum Press.

Pulos, L. (1982). Self hypnosis tapes. Vancouver, B.C.: Ocean Sound Studios, Bob Reimer Producer.

Name:_____
Date:_____
Time Started:_____
Time Ended:_____
Where did you practise?_____

*Adapted from Everly and Rosenfeld (1981)

Specify type of mental imagery used:
Basic Performance

Were you able to generate an image where you successfully completed the desired skill? Yes____ No____. If no, what seemed to prevent you from completing the iage successfully?

Did you image as an observer O, a participant P, or both B? _____.

From which point of view do you feel most effective? _____.

Did your mind wander? Not at all ____ just slightly____
moderately ____ very much so ____
Yes____ No____

Did you get drowsy? Yes____ No ____
Did you fall asleep? Yes____ No ____

During the session did you feel any:

heaviness	Not at all___	just slightly___	moderately___	very___
floating or lightness	Not at all___	just slightly___	moderately___	very___
numbness	Not at all___	just slightly___	moderately___	very___
warmth	Not at all___	just slightly___	moderately___	very___
calmness	Not at all___	just slightly___	moderately___	very___
security	Not at all___	just slightly___	moderately___	very___
certainty	Not at all___	just slightly___	moderately___	very___
concentrated	Not at all___	just slightly___	moderately___	very___
relaxed	Not at all___	just slightly___	moderately___	very___

At any point during the exercise did you feel:

anxious	Not at all___	just slightly___	moderately___	very___
unsure	Not at all___	just slightly___	moderately___	very___
bored	Not at all___	just slightly___	moderately___	very___
uncomfortable	Not at all___	just slightly___	moderately___	very___
self-conscious	Not at all___	just slightly___	moderately___	very___

Describe any other physical or mental sensations that occurred.

Describe anything that you expecially liked about the session.

Describe anything that you expecially disliked about the session.

List any clues or helpful strategies which may help you to relax next time.

Any other comments about the session which you feel are important.

Basic Performance Practise Exercise - Discussion

Were you relaxed?

When you go back to the beginning how did you settle down?

Inorder to experience yourself performing well what other cues would have been helpful: for example -

Where do you initiate the serve?
How is your balance?
How do you use your arms and head?
How do you use your legs? Your hips?
Notice as much detail as possible.

Did you experience difficulty doing the exercise as an observer and a participant? Which created the strongest images?

Do you think you would use this to enhance other skills?

Please write down any new or interesting awareness the discussion has brought about for you on the back of the sheet.

APPENDIX C

Components of an Optimal Performance State (OPS)

Optimal Performance State Definitions

Optimal Performance State Monitoring Forms A and B

Optimal/Ideal Performance State (OPS)

The ability to achieve and maintain an optimal performance state can be systematically taught:

1. Become aware of the optimal performance state:

   a) identify and define components.
   b) idenfity which cues are associated with these components.

2. Get in touch (evaluate) with your experiences related to the components of the optimal performance state, e.g., Optimal Performance Inventory (post warm-up) and Skills Self-rating Inventory (post match).

3. Mentally rehearse psychological readiness as part of preparing for competiton, e.g., imagery training exercises.

Components of an Optimal Performance State

Physical Relaxation: the experience of loose muscles and movements that are fluid, precise, and sure.
Cues: muscles loose throughout body; feelings of warmth; movements fluid; body seems to respong directly and precisely to desired performance.
*this component is dependent both on your ability to recognize tension and on your ability to voluntarily create and maintain a relaxed state.

Highly Energized: this state of high energization appears to be associated with feelings of joy, ecstasy, intensity, and feeling 'charged' or 'hot'.
*sleep and nutrition are essential for high energy in athletics, of couse, but beyond that, in mental training, we discover that having positive emotions and being focused on the present are also associated with high energy.

Focus on the present: dealing with the here and now. You focus on the present and have a sense of mind-body integration.
Cues: sense of harmony - that is, of body and mind working together as a unit; as sense of body performing automatically,without conscious or deliberate mental effort
*Focus on the present leaves little room for distraction By thoughts, activities outside the performance, and so on. Maintaining your focus and concentration is also dependent on your being engaged in what for you are highly motivating activities and on your working toward goals with high expectations of success.

Mental Relaxation: this state is associated with a sense of inner calm and a high level of concentration. Sometimes a sense of the slowing down of time accompanies this.
Cues: inner calm, time slowed down, able to focus on details in the present; concentration.

(con't)

(con't)

*This component is dependent both on your ability to recognize tension and on your ability to voluntarily create and maintain a relaxed state.

In Control: when someone performs under OPS there is no delibrate effort to exert control over the situation or over others yet there is the ability to make the 'right moves at the right time' and to 'do no wrong'. All thoughts and emotions direct energy toward the task at hand.

Cues: your thoughts and emotions are under your control. You can automatically (without effort) control your body. Body seems to be automatically what you want it to do; mind seems to respond to the environment and to process all information from it in the most efficient and appropriate ways possible; no sense of exerting or imposing control, as though everything is happening as you wish to.

*Open and relaxed to the experience, and your mind and body seem to respond directly to your wishes. This mental control creates a feeling of physical control.

Confident/Optimistic: a positive outlook and attitude which provides an inner sense of optimism about ones ability to perform well (challenged vs threat). This inturn boosts feeling of self-confidence.

Cues: high expectation of success; recognition of challenge and excitement in response to the idea of accepting that challenge; feelings of strength and control.

*These positive emotions depend on your ability to maintain overall optimal performance state. As well your physical conditioning will affect confidence.

Extraordinary Awareness (environmental and others): this is closely related to being focused on the present where you are highly attuned to your body and its functions. OPS is also associated with an acute awareness of your body and its integration with the enviroment, the felling of at one with it. You can sense without looking where your boundries are.

Cues: a sense of being completely in harmony with one's environment. An acutely sharp sense of one's whole body, it's movements and mental impressions in relation to the environment and other players.

*Be relaxed and open to that experience. Establishing harmony between your mental image of the activity and the activity itself creates a sense of acute awareness of every detail of the performance.

Motivation: achieving optimal performances begins with the discovery, complete acceptance and development of skills to exercise consciously the power of motivation. It is a commitment to move toward something you want and are willing to work for 'the will to do it'.

Cues: desire or will to do it. Energized to take part in the activity and challenged by the situation.

*Definite goals of both long-term and shor-term variety help to instill desire over time. Specific situational factors can enhance this drive.

(con't)

(con't)

Team Unity: trust, understanding, and support of and from fellow players. You are attuned to them as well as yourself and the environment.

Cues: trust, understanding, and supportive feeling. These feelings are felt from others and as well you express them towards others. A sense of energies directed toward the same end.

*A telepathic experience of knowing what others are thinking and feeling. Sharing of energy and focus within a very supportive situation.

Strategy: Keen awareness of what must be done to overcome the opposition. You know your own strengths and weaknesses, as well as their strengths and weaknesses and how you will impliment your abilities to out perform theirs. This brings a united focus to the individuals making up the team.

Cues: certainty of responsibilities and how this role contributes to the team productivity. Understanding of the team role and your individual role within it.

*Affected by motivation, knowledge of opposition, awareness of your own attributes and understanding of your role and its relation to other players.

physical relaxation.....My movements feel smooth and free flowing.

highly energized.....I feel energitic

focus on the present.....I feel perceptive to cues relevant to my performance.

mental relaxation.....My mind was on the game, our strategy and the process of playing.

in control.....I feel in control of my thoughts and emotions.

confident/optimistic.....I feel confident about the way I could perform.

extraordinary awareness.....I feel in-tune with the gym, court, etc.

motivation.....I feel motivated by competitive conditions.

team unity.....Interaction with my teammates was positive and supportive.

strategy.....I feel prepared strategically to play the opposition.

OPS SELF-MONITORING
DEFINITIONS

My movements feel smooth and free flowing:
Muscles loose throughout body; no unnecessary tension; feelings of warmth; movements fluid; body seems to respond directly and precisely to desired performance. This component is dependent both an individuals ability to recognize tension and on their ability to voluntarily create and manintain a relaxed state.

I feel energetic:
Associated with feelings of joy, ecstasy, intensity, and of feeling 'charged' or 'hot'. Sleep and nutrition are essential for high energy in athletics, of course, but beyond that, in mental training, we discover that having positive emotins and being focused on the present are also associated with high energy.

I feel my focus of attention will enhance my performance:
Sense of harmony - that is, of body and mind working together as a unit; a sense of body performing automatically, without conscious or delibrate mental effort. Focus on the present leaves little room for distraction by thoughts, activities outside the performance, and so on. Maintaining your focus and concentration is also dependent on your being engfaged in what for you are highly motivating activities and on your working toward goals with high expectatins of success.

My mind is on the game, our strategy and the process of playing:
Inner calm; time slowed down; able to focus on details in the present; concentration. This component is dependent both on your ability to recognize tension and on your ability to voluntarily create and maintain a relaxed state.

I feel in control of my thoughts and emotions:
Your thoughts and emotions are under your control. You can automatically (without effort) control your body. Body seems to be automatically what you want it to do; mind seems to respond to the environment and to process all information from it in the most effiecient and appropriate ways possible; no sense of exerting or imposing control, though everything is happening as you wish to. Open and relaxed to the experience, and your mind and body seem to sespond directly to your wishes. This mental control creates a feeling of physical control.

I feel confident about the way I can perform:
High expectation of success; recognition of challenge and excitement in response to the idea of accepting that challenge; feelings of strength and control. These positive emotions depend on your ability to maintain overall optimal performance state. As well your physical conditioning will affect confidence.

(con't)

(con't)

I feel motivated by the competitive conditions:

Desire or will to do it. Energized to take part in the activity and challenged by the situation. Defnite goals of both long term and short term variety help to instill desire over time. Specific situational factors can enhance this drive.

I feel in tune with the gym, court, etc.

A sense of being completely in harmony with one's envirnment. An acutely sharp sense of one's whole body, it's movements and mental impressions in relatin to the environment and other players.

Interaction with my teammates is postive and supportive:

Trust, understanding, and supportive feeling. These feelings are felt from others. A sense of energies directed toward the same end. A telepathic experience of knowing what others are thinking and feeling. Sharing of energy and focus within a very supportive situation.

I feel prepared strategically to play the opposition:

Certainty of responsibilities and how this role contributes to the team productivity. Understanding of the team role and your individual role within it. Affected by motivation, knowledge of opposition, awareness of your own attributes and understanding of your role and its relation to other players.

OPS

Name:_____
Date:_____
Opposition:_____
Outcome:_____

My movements feel smooth and free flowing.

1 2 3 4 5 6 7 8 9 10

I feel energetic.

1 2 3 4 5 6 7 8 9 10

I feel my focus of attention will enhance my performance.

1 2 3 4 5 6 7 8 9 10

My mind is on the game, our strategy and the process of playing.

1 2 3 4 5 6 7 8 9 10

I feel in control of my thoughts and emotions.

1 2 3 4 5 6 7 8 9 10

I feel confident about the way I can perform.

1 2 3 4 5 6 7 8 9 10

I feel motivated by the competitive conditions.

1 2 3 4 5 6 7 8 9 10

I feel in tune with the gym, court, etc.

1 2 3 4 5 6 7 8 9 10

Interaction with my teammates is positive and supportive.

1 2 3 4 5 6 7 8 9 10

I feel prepared strategically to play the opposition.

1 2 3 4 5 6 7 8 9 10

(con't)

(con't)
Name:_____
Date:_____
Score:_____
Vs:_____

Serve

not effective	somewhat effective	adequate	quite effective	very effective

- contributing factors:

Serve receive

not effective	somewhat effective	adequate	quite effective	very effective

- contributing factors:

Setting:

not effective	somewhat effective	adequate	quite effective	very effective

- contributing factors:

Spiking

not effective	somewhat effective	adequate	quite effective	very effective

- contributing factors:

Blocking

not effective	somewhat effective	adequate	quite effective	very effective

- contributing factors:

APPENDIX D

Mood Sheet

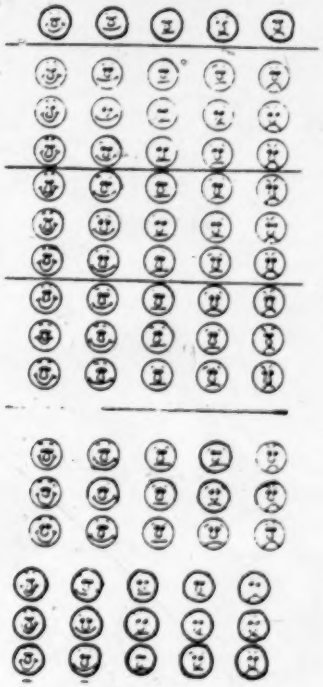
Mood Inventory

Record general mood for your day as you feel it has been on average before you start to get ready for practise. As well briefly indicate what you feel some of the contributing factors are, i.e., mark on exam, weather, alarm clock, fight with friend.

Record your mood and changes it may take over the course of a practise session, i.e., what is mood at start of practise, is there a mood change during, what is mood at the end.

DAILY MOOD CHART

DATE:_____

	MOOD SCALE	COMMENTS
START OF PRACTICE		
start (s) mood change (ms) End (e)		
(s) (ms) (e)		
(s) (ms) (e)		
(s) (ms) (e)		
(s) (mc) (e)		
(s) (mc) (e)		
END OF PRACTISE		

Orlick, T. (1980). In pursuit of excellence. Canada: Coaching Association of Canada.

APPENDIX E

Background Questionnaire

Goal Sheet

Background Information Questionnaire

Name: _____
Address: _____
_____
_____
_____
(ph.) _____

age: _____

Level of competition reached: # of years played

National Jr./Sr.	____/____	____	____
Provincial	____	____	____
University	____	____	____
College	____	____	____
Club	____	____	____
High School	____	____	____
Jr. High	____	____	____

**check any that are applicable and give approximate year that you played at that level, (i.e., 1979-82) and the number of years played at that level (i.e., 3).

Other sports presently involved with:

Have you ever been involved in a structured psychological skills development program for enhancement of your:

sport skills? yes____; no____.
life skills? yes ____; no____.

If you answered yes to either of the above please indicate:

How long the program ran:

During which year and months did you partake in the program:

UNIVERSITY OF ALBERTA

PANDA VOLLEYBALL TEAM

1986-87 GOALS

A) SCHOOL

Course	Goal
1)	
2)	
3)	
4)	
5)	

B) VOLLEYBALL

1) TECHNICAL

a) Serving: _____

b) Service Reception: _____

c) Attack: _____

d) Blocking: _____

2) TACTICAL

Skill	Goal

3) PHYSICAL

Type	Goal

4) MENTAL

Type	Goal

5) ROLE GOAL

6) TEAM PERFORMANCE GOAL

7) OTHER GOALS YOU WANT TO SET

APPENDIX F

TAIS Profile Analysis

Test of Attentional and Interpersonal Style (TAIS)

TAIS

Tais Profile Analysis

The purpose of this analysis is to interpret your TAIS scores as they relate to:

A. Attentional Scales:

1. Your basic attentinal style (i.e., your habitual or customary manner in attending to things, events or people).

2. The strengths and/or weaknesses of your attentional style for the specific tasks and situations you will face in your sport. The direct implication here, of course, is that there is no all-encompassing perfect way of concentrating in sport. This is because different tasks and different situations require or demand different focuses of attention. Thus, your style of attending will be appropriate in some situations and not in others.

3. The kinds of mental errors you are likely to make during a game (and why) because of your particular attentional style.

4. What happens to your ability to concentrate when game pressure causes your arousal level to increase.

5. What kinds of psychological stress you ar likely to experience (and why) during a game and the efffect it will have on your attention.

B. Interpersonal Scales:

1. Your general style of interacting with other people (particularly your teammates, coaches, opponents and officials) and how this style will both help or hinder your athletic performance during competition and during training and practise.

2. The specfic interpersonal situations which might might be stressing or arousing for you and which might affect your performance in a negative way.

Naturally, this interpretation is mainly an intruitive or subjective appraisal of your scores, even though your responses to the test questions were structured as objectively as possible. Because of this, feedback from you, through discussion, is imperative in order for us to make specific recommendations as to how we can improve your performance. Therefore, as you read this, please make note of which aspects you agree or disagree with.

TEST OF ATTENTIONAL AND INTERPERSONAL STYLE

Robert M. Nideffer, PH.D.

INSTRUCTIONS

USE NO. 2 PENCIL

DO NOT WRITE ON THE TEST BOOKLET

Read each item carefully and then answer according to the frequency with which it describes you or your behavior. For example, item 1 is "When people talk to me, I find myself distracted by the sights and sounds around me".

A - NEVER
B - RARELY
C - SOMETIMES
D - FREQUENTLY
E - ALWAYS

If your answer to the first item is SOMETIMES, you would mark with a No. 2 pencil under C for item number 1. The same key is used for every item, thus each time you mark an A you are indicating Never, etc.

1. Please be sure to mark your name in the spaces provided at the right of the answer sheet.

2. Fill in your date of birth in the spaces provided at the bottom of the answere sheet.

3. Indicate your sex in the space provided.

4. At the bottom of the answer sheet under Grade, please indicate the number of years of schooling you have completed.

Distributed by:
BEHAVIORAL RESEARCH APPLICATIONS GROUPS, INC.
19 Cambridge St. Rochester, New York 14607
75 Perkell Place Kitchener, Ontario

1. When people talk to me I find myself distracted by the sights and sounds around me.
2. When people talk to me I find myself distracted by my own thoughts and ideas.
3. All I need is a little information and I can come up with a large number of ideas.
4. My thoughts are limited to the objects and people in my immediate surroundings.
5. I need to have all the information before I say or do anything.
6. The work I do is focused and narrow, proceeding in a logical fashion.
7. I run back and forth from task to task.
8. I seem to work in "fits and starts" or "bits and pieces".
9. The work I do involves a wide variety of seemingly unrelated material and ideas.
10. My thoughts and associations came so rapidly I can't keep up with them.
11. The world seems to be a booming buzzing brilliant flash of color and confusion.
12. When I make a mistake it is because I did not wait to get all of the information.
13. When I make a mistake it is because I waited too long and got too much information.
14. When I read it is easy to block out everything but the book.
15. I focus on one small part of what a person says and miss the total message.
16. In school I failed to wait for the teacher's instructions.
17. I have difficulty clearing my mind of a single thought or idea.
18. I think about one thing at a time.
19. I get caught up in my thoughts and become oblivious to what is going on around me.
20. I theorize and philosophize.
21. I would rather be feeling and experiencing the world than my own thought.
22. I would rather be feeling and experiencing the world than my own thoughts.
23. My environment is exciting and keeps me involved.
24. My interests are broader than most people's.
25. My interests are narrower than most people's.
26. It is easy for me to direct my attention and focus narrowly on something.
27. It is easy for me to focus on a number of things at the same time.
28. It is easy for me to keep thoughts form interfering with something I am watching or listening to.
29. It is easy for me to keep sights and sounds from interfering with my thoughts.
30. Happenings or objects grab my attention.
31. It is easy for me to keep my mind on a single thought or idea.
32. I am good at picking a voice or instrument out of a piece of music that I am listening to.
33. With so much going on around me, it's difficult for me to think about anything for any length of time.

34. I am good at quickly analyzing complex situations around me, such as how a play is developing in football or which of four or five kids started a fight.
35. At stores I am faced with so many choices I can't make up my mind.
36. I spend a great deal of my time thinking about all kinds of ideas I have.
37. I figure out how to respond to others by imagining myself in their situation.
38. In school I would become distracted and didn't stick to the subject.
39. When I get anxious or nervous my attention becomes narrow and I fail to see important things that are gong on around me.
40. Even though I am not hungry, if something I like is placed in front of me, I'll eat it.
41. I am more of a doing kind of person than a thinking one.
42. In a room filled with children or out on a playing field, I know what everyone is doing.
43. It is easy for me to keep my mind on a single sight or sound.
44. I am good at rapidly scanning crowds and picking out a prticular person or face.
45. I have difficulty shifting back and forth from one conversatin to another.
46. I get confused trying to watch activities such as a football game or circus where a number of things are happening at the same time.
47. I have som many things on my mind that I become confused and forgetful.
48. On essay tests my answeres are (were) too narrow and don't cover the topic.
49. It is easy for me to forget about problems by watching a good movie or by listening to music.
50. I can't resist temptation when it is right in front of me.
51. In games I make mistakes because I am watching what one person does and forget about the others.
52. I can plan several moves ahead in complicated games like bridge and chess.
53. In school I was now a "thinker".
54. In a roomful of people I can keep track of several conversatins at the same time.
55. I have difficulty telling how others feel be watching them and listening to them talk.
56. People have to repeat things to me because I become distracted by irrelevant sights or sounds around me.
57. I make mistakes because I try to do too many things at once.
58. I am good at analyzing situations and predicting in advance what others will do.
59. On essay tests my answere are (were) too broad, bringing in irrelevant information.
60. People fool me because I don't bother to analyze the things that they say; I take them at face value.
61. I would much rather be doing something than just sitting around thinking.
62. I make mistakes because my thoughts get stuck on one idea or feeling.
63. I am constantly analyzing people and situations.
64. I get confused at busy intersections.

65. I am good at glancing at a large area nd quickly picking out several objects, such as in those hidden figure drawings in children's magazines.
66. I get anxious and block out everything on tests.
67. Even when I am involved in a game or sport, my mind is going a mile a minute.
68. I can figure out how to respond to others just by looking at them.
69. I have a tendency to get involved in a conversation and forget important things like a pot on the stove, or like leaving the motor running on the car.
70. It is easy for me to bring together ideas from a number of different areas.
71. Sometimes lights and sounds come at me so rapidly they make me lightheaded or dizzy.
72. People have to repeat things because I get distracted by my own irrelevant thoughts.
73. People pull the wool over my eyes because I fail to see when they are obviously kidding by looking at he way they are smiling or listening to their joking tone.
74. I can spend a lot of time just looking at things with my mind almost a complete blank except for reflecting the things that I see.
75. I sometimes confuse others because I tell them too many things at once.
76. I engage in physical activity.
77. People describe me as serious.
78. I sit alone listening to music.
79. People take advantage of me.
80. I keep my thoughts to myself.
81. I keep my feelings to myself.
82. I am good at getting my own way.
83. I like to argue.
84. Others see me as a loner.
85. I talked a lot in class when I was in school.
86. I enjoy intellectual competition with others.
87. I enjoy individual athletic competition.
88. I compete(d) athletically.
89. I physically express my feelings of affection.
90. I compete with myself intellectually.
91. I compete with myself physically.
92. I enjoy activities with danger or and element of the unknown in them.
93. I express my opinions on issues.
94. I can keep a secret.
95. When I believe deeplyu in something I find I am a poor loser and unable to compromise.
96. I am socially self-confident when interacting with those who are like myself.
97. I am socially self-confident when interacting with authority figures.
98. I am socially self-confident when talking in fornt of large groups.
99. I am socially self-confident when talking with the opposite sex.
100. I express my anger.
101. I dated in high school.

102. People think I am a clown.
103. I get mad and express it.
104. I get down on myself.
105. I was one of the smartest kids in school.
106. I am a good person.
107. My feelings are intense.
108. I need to help others.
109. I need to be liked.
110. I enjoy planning for the future.
111. I wish I lived in a different time.
112. I feel guilty.
113. I feel ashamed.
114. I am seen as a cold person by others.
115. I am a good mixer.
116. I am socially outgoing.
117. I have difficulty waiting for good things to happen.
118. I peeked at Christmas time.
119. When I am angry I lose control and say things that sometimes hurt others.
120. I have been angry enough that I physically hurt someone.
121. As dandes or parties I find a corner and avoid the limelight.
122. I acted in dramatic productions in high school and/or college.
123. In school the kids I hung aroung with were athletes.
124. In school the kids I hung around with were intellectuals.
125. In school the kids I hung arouns with were popular.
126. In school the kids I hung around with were outcasts aor loners.
127. People trust me with their secrets.
128. I am in control in interpersonal situations.
129. I fought in school.
130. I have used illegal drugs.
131. In groups I am one of the leaders.
132. People admire me for my intellect.
133. People admire me for my physical ability.
134. People admire me for my concern for others.
135. People admire me for my social status.
136. I ran for class offices in school.
137. I feel as though I am a burden to others.
138. People see me as an angry person.
139. I see myself as an angry person.
140. I have a lot of energy for my age.
141. I am always on the go.
142. I cut class in high school.
143. I have engaged in activities that could get me in trouble with the police.
144. I guess you could call me a poor loser.

APPENDIX G

Survey of Mental Imagery (SMI)

Client #____
Age: ____
Date: ____

SURVEY OF MENTAL IMAGERY: FORM A
Devised by Joseph E. Switras

Instructions to examinees:

The following is a questionaire designed todetermine the type of mental images that you are able to produce and manipulate. But first, what are mental images? In the past they have been caooed pictures in the mind, byt actually images can be tastes, sounds, feelings, etc. An image can be something that may look as if you can just reach out and pick it up, but which is really not there. An image can be the taste of an oragne when you have not actually eaten one. An image may be the smell of a flower when you try ot remember what one smells like. As a last example the picture in your mind of your home as you try to recall what it looks like, is also an image. An image can be experienced as a photograph, a movie or as it you are really there and it is really happening.

In responding to this questionnaire you will be asked to imagine that a variety of things are actually happening. You may be asked to close your eyes and try to see a flowerpot, one with a large red flower growing out of it. All this will occur in your thoughts only, but at the time may seem as real as the chair in which you are seated. For most people this is a new and exciting experience, one that proves quite interesting.

With the actual image proposals, please choose the answer that is closest to describing what it is that you are experiencing. Answer every question, even if the answeres do not express precisely how you feel. Mark your answers on the answer sheet only

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The following sections will deal with actual images that you will attempt to produce. These will involve seeing, hearing, smelling, tasting, feeling and doing things that occur in your mind and imagination only. Respond to each test item in the following manner. First read the item, then close your eyes and try to have the proposed experience. Whatever the task indicated by the item (visualing a picture, tasting a fruit, etc.) pay attention to two elements of what is occurring: (1) How well you can control or manipulate the image, and (2) How vivid or real is the scene, taste, sensation, etc. By control is meant experiencing the scene as close to the item instructions as possible. For example, being able to form a mental picture of a squirrel eating an acorn.

Each item is followed by two opportunities to respond. (1) Since each item is in the form of a question, it is possible to respond with either a 'yes,' 'no,' or 'unsure.' On the answer sheet blacken in number three (yes) if you produced the proposed image; blacken in number one (no) if you did not produce theimage. If you are really not sure if the image was there, blacken in number two (unsure). (2) Next, five numbers follow preceded by the word 'vividness.' Each number tells how vivid or real the image was as you experienced it. On the answer sheet blacken in the number one (1) if there is absolutely no image, and all that is happening is that you are thinking of the scene, odor, sound, etc. Blacken number two (2) if you are uncertain of the image, if the image is indistinct, vague, ambiguous, dim, hazy, doubtful, etc. Blacken number three (3) if the image is limited or moderately clear, vivid, and perceptible. Blacken number four (4) if the proposed experience is reasonably unobscure, vivid, and clear. Finally, blacken number five (5) if the experience (image) seems as if it is really happening. Here the image should be distinct, 'photographic,' and perfectly clear and vivid; exactly the experience proposed.

Be sure that you attempt each item, and respond to both questions that follow the item.

An example of how to respond:

Q. Can you visualize a book?
   1. 1-no 2-unsure 3-yes
   2. Vividness 1 2 3 4 5
A. 1. No (1) Unsure (2) Yes (3) 2. V 1 2 3 4 5

Responses one and two indicate that the image of a book did occur, and that it seemed as if a real book was actually there.

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Example two:

Q. Can you taste sour milk?
3. 1-no 2-unsure 3-yes
4. Vividness 1 2 3 4 5

A. 3. No (1) Unsure (2) Yes (3) 4. V 1 2 3 4 5

Responses three and four indicate that this person could not be sure if the image was there. However, some indistinct, bafue trace of a taste occurred that seemed to resemble sour milk.

When ready, you may begin. Be sure to respond to each item.

VIVIDNESS SCALE:
1) Absolutely no image.
2) Indistinct, vague, ambiguous, dim, hazy, doubtful.
3) Limited; moderately clear, vivid, and perceptible.
4) Reasonable unobscure, vivid, and clear.
5) Really ahppening; distinct, photographic, perfectly clear and vivid.

A. Attempt these items with your eyes closed. Try to get a mental picture (visualize) of what is proposed in each item.

(1-2) Can you see the color red?
(3-4) Can you see a horse standing alone?
(5-6) Can you see the horse trot away?
(7-8) Can you see a bird sitting on a telephone wire?
(9-10) Can you see the bird jump form the wire and fly to the ground?
(11-12) Can you see the bird fly up to and land on the branch of a tree?
(13-14) Can you see a bottle on a picnic table?
(15-16) Can you see the same bottle on the picnic table, filled with a colored liquid?
(17-18) Can you see the same bottle with a different colored liquid?
(19-20) Can you see a girl with red hair eating a green apple?
(21-22) Can you see a tobacco pipe?
(23-24) Can you visualize the number 123 written on a blackboard?
(25-26) Can you visualize a circle with the letter 'B' inside?
(27-28) Can you see a dog dancing?
(29-30) Can you see a bird reading?
(31-32) Can you see a woman lifting an automobile over her head?

VIVIDNESS SCALE:
1) Absolutely no image.
2) Indistinct, vague, ambibuous, dim, hazy, doubtful.
3) Limited; moderately clear, vivid, and perceptible.
4) Reasonable unobscure, vivid, and clear.
5) Really happening; distinct, photographic, perfectly clear and vivid.

B. Attempt the following items with your eyes closed. Try to hear the sound proposed in each item.

(33-34) Can you hear the voice of a woman talking to someone?
(35-36) Can you hear a woman's voice in the distance yelling something out loud?
(37-38) Can you hear a masculine voice humming a tune?
(39-40) Can you hear the sound of a train whistle?
(41-42) Can you hear the sound of a police siren?
(43-44) Can you hear a record being played loudly?
(45-46) Can you hear someone lower the volume on the record player?
(47-48) Can you hear a trumpet being played?
(49-50) Can you hear a bathtub filling with water?
(51-52) Can you hear a child crying?
(53-54) Can you hear someone with heavy leather boots walking across a wooden floor?
(55-56) Can you hear two people whistling while a third person sings?
(57-58) Can you hear water splashing?

C. Again with your eyes closed, attempt to smell the following odors and fragrance.

(59-60) Can you smell the odor of a gasoline station?
(61-62) Can you smell a raw onion?
(63-64) Can you smell a rose?
(65-66) Can you smell an odor that you really like?
(67-68) Can you smell the odor of a freshly mown lawn?
(69-70) Can you smell a hamburger?
(71-72) Can you smell the odor of a new pair os shoes?
(73-74) Can you smell the scent of a new bar of soap/
(75-76) Can you smell incense burning?
(77-78) Can you smell the odor of sausage frying?
(79-80) Can you smell the strong odor of amonia?

VIVIDNESS SCALE:
1) Absolutely no image.
2) Indistinct, vague, ambiguous, dim, hazy, doubtful.
3) Limited; moderately clear, vivid, and perceptible.
4) Reasonably unobscure, vivid, and clear.
5) Really happening; distinct, photographic, perfectly clear and vivid.

D. With eyes closed, attempt to experience the proposed tastes.

(81-82) Can you taste fresh raw lemon juice?
(83-84) Can you taste salt?
(85-86) Can you taste something sweet?
(87-88) Can you taste a chocolate bar?
(89-90) Can you taste jelly?
(91-92) Can you taste an apple?
(93-94) Can you taste soup?
(95-96) Can you taste fried chicken?
(97-98) Can you taste salad dressing?
(99-100) Can you taste a piece of pizza?
(101-102) Can you taste Coca-Cola?
(103-104) Can you taste a pear?
(105-106) Can you taste fried eggs?

V. Next, see if you cn feel the following proposed experiences. Once again, attempt to have these experiences with your eyes closed.

(107-108) Can you feel a toothbrush rubbing against your gums and teeth?
(109-110) Can you feel long cool grass against the bottom of your bare feet?
(111-112)Can you now feel a rough scouring-pad rubbing over your fingertips?
(113-114) Can you feel a feather tickling your nose?
(115-116) Can you feel a hand on your shoulder?
(117-118) Can you feel fingers scratching your scalp?
(119-120) Can you feel a warm cup pressed against your lips?
(121-122) Can you feel your hand on a doorknob:
(123-124) Can you feel fur-lined gloves on your hands?
(125-126) Can you feel warm soup in your mouth?

Vividness Scale:
1) Absolutely no image.
2) Indistinct, vague, ambiguous, dim, hazy, doubtful.
3) Limited, moderately clear vivid and perceptible.
4) Reasonably unobscure, vivid and clear.
5) Really happening; distinct, photographic, perfectly clear and vivid.

VI. With eyes closed, try to image (experience) the following physical sensations.

(127-128) Can you imagine yourself being extremely hungry?
(129-130) Can you imagein (feel yourself) becoming sick to your stomach?
(131-132) Can you feel your mouth become dry?
(133-134) Can you feel your mouth now become very moist?
(135-136) Can you feel a headache?
(137-138) Can you now feel your body surge with energy?
(139-140) Can you feel a tickle in your arm?
(141-142) Can you feel a numbness in your foot?
(143-144) Can you feel the numbness move up to your hand?
(145-146) Can you feel an itch on your left cheek?

VII. With eyes closed, try to experience the following movements, as if you were actually doing them?

(147-148) Can you feel yourself running down some stairs?
(149-150) Can you feel yourself jumping up and down?
(151-152) Can you feel yourself throwing a heavy rock?
(153-154) Can you feel yourself drawing a triangle?
(155-156) Can you feel yourself writing your name?
(157-158) Can you feel yourself kicking a football?
(159-160) Can you feel yourself swinging a baseball bat?
(161-162) Can you feel yourself tying a rope know?
(163-164) Can you feel youself swinging on a park swing?
(165-166) Can you feel yourself shuffling a deck of playing cards?
(167-168) Can you feel yourself bending down to pick up a dime?
(169-170) Can you feel yourself standing up from a seated position?
(171-172) Can you feel yourself singing a song?

APPENDIX H

Competitive Reflections

Precompetitive Plan A and B

Event Focus Plan C

Competitive Reflections

These questions are designed to help you reflect upon your personal competitve history and to help you develop or refine a precompetitive plan and a competition focus plan.

Knowing your competition self:

1. Think of your all-time best performance(s) and respond to the following questions keeping that event(s) in mind:

2. At what time of day was the event held?

3. How did you pass time leading up to the event?

4. What did you do physically to prepare for the game (prior to warm-up)? Where did you do these things? And whom did you do them?

5. What did you do mentally to prepare for the game (prior to warm-up)? Where did you do these things? And whom did you do them?

6. How did you feel just before that event?

No activation (mentally or physically flat) 0 1 2 3 4 5 6 7 8 9 10 highly activated (mentally and physically charged)

Not worried or scared at all 0 1 2 3 4 5 6 7 8 9 10 extremely worried or scared

7. What were you saying to yourself or thinking shortly before the start of the event(s)?

8. How were you focused during the event (i.e., what were you aware of or paying attention to while actively engaged in the performance)?

9. Now think of your worst competitive performance(s) and respond to the following questions keeping that event in mind:

10. At what time of day was the match held?

11. How did you pass time leading up to the match?

12. What did you do physically to prepare for the match (prior to the warm-up)? Where did you do these things and with whom did you do them?

13. What did you do mentally to prepare for the match (prior to the warm-up)? Where did you do these things and with whom did you do them?

14. How did you feel just before that event?

No activation (mentally and physically flat) 0 1 2 3 4 5 6 7 8 9 10 highly activated (mentally and physically charged)

Not worried or scared at all 0 1 2 3 4 5 6 7 8 9 10 extremely worried or scared

15. What were you saying to yourself or thinking shortly before the start of the event?

16. How were you focused during the event (i.e., what were you aware of or paying attention to while actively engaged in the performance)?

17. What were the major differences between your thinking (or feelings) prior to these two performances (i.e., best and not-so-best)?

18. What were the major differences in your focus of attention during these performances (i.e., best and not-so-best)?

19. How would you prefer to feel just before an important performance?

No activation (mentally and physically flat) 0 1 2 3 4 5 6 7 8 9 10 highly activated (mentally and physically charged)

20. How would you prefer to focus your attention during an important performance?

21. Is there anything you would like to change about the way you approach a competition? or training?

22. Is there anything you would prefer to change about the way the coach(es) approaches you during training or competitions?

PANDA VOLLEYBALL

GENERAL GUIDE FOR THE PRECOMPETITIVE PLAN - CONTENT

General Physical Warm-up	General Psychological Warm-up	Start Prep. Physical	Start Prep. Psych.
easy stretch and run, free skill practise simulate impor tant segments of competition	Establish comfort zone with competition area, own space, reminders of potential and strengths, positive imagery, re-assuring self-statement, reminder of on-site goals to establish the best focus and perspective.	specific pre planned indiv idual and/or team warm-up.	specific pre-event thoughts: brief mental review, adjust activation level if nec-essary, reminder of complete readiness, once in ready pos-ition, focus on the task immediately in front of you.

PERSONAL PRECOMPETITIVE PLAN

Name: _____
Date: _____

Activity (off-site phys. and mental prep.)	Desired feeling or appearance	Result	Problems and coping response

EVENT FOCUS PLAN - CONTENT

GENERAL GUIDE: List the critical situations you are likely to face within the game. Then indicate how you would prefer to respond to each ot these situations (e.g., what would be your ideal on-court response?). Draw upon what worked best for previous best performances in that situation. Think of a focus or cue word that will allow you to focus properly to bring on your prefered response.

Critical Situation	Prefered response (on-court)	Focus on cue word or image to bring on prefered response.

APPENDIX I

Imagery Training Program Year-end Evaluation

Dear Diary

Evaluation of Mental Training Program

The purpose of this evaluation is to determine to what extent (if any) you feel the mental training program to which you were exposed affected you. Please use the scale below (in which - 5 indicates "hindered," 0 indicates "no effect," and 5 indicates "helped a lot") to express how you feel each of the Program Components listed below affected you with respect to pursuing your personal goals this year.

Program Component	Hindered, interfered	No effect didn't help didn't hurt	Helped a lot
relaxation	-1 -2 -3 -4 -5	0	1 2 3 4 5
basic performance	-1 -2 -3 -4 -5	0	1 2 3 4 5
top performance	-1 -2 -3 -4 -5	0	1 2 3 4 5
ideal performance	-1 -2 -3 -4 -5	0	1 2 3 4 5
rt. time/rt. place	-1 -2 -3 -4 -5	0	1 2 3 4 5
instant preplay	-1 -2 -3 -4 -5	0	1 2 3 4 5
instant replay	-1 -2 -3 -4 -5	0	1 2 3 4 5
energizing	-1 -2 -3 -4 -5	0	1 2 3 4 5
parking	-1 -2 -3 -4 -5	0	1 2 3 4 5
mood sheets	-1 -2 -3 -4 -5	0	1 2 3 4 5
checklists	-1 -2 -3 -4 -5	0	1 2 3 4 5
post competitive evaluation forms			
Optimal performance state	-1 -2 -3 -4 -5	0	1 2 3 4 5
Self rating of performance	-1 -2 -3 -4 -5	0	1 2 3 4 5
T.A.I.S. - individual meeting to review profile	-1 -2 -3 -4 -5	0	1 2 3 4 5
group sessions regarding mental imagery training	-1 -2 -3 -4 -5	0	1 2 3 4 5
individual sessions regarding mental imagery training	-1 -2 -3- 4- 5	0	1 2 3 4 5
setting specific goals	-1 -2 -3 -4 -5	0	1 2 3 4 5
precompetitive plan	-1 -2 -3 -4 -5	0	1 2 3 4 5
competitive focus plan	-1 -2 -3 -4 -5	0	1 2 3 4 5
refocusing plan	-1 -2 -3 -4 -5	0	1 2 3 4 5
practise of mental skills during practise	-1 -2 -3 -4 -5	0	1 2 3 4 5
overall mental training program	-1 -2 -3 -4 -5	0	1 2 3 4 5

(cont)

III) Over the course of the season	less aware					same, no change				much more aware
Did you become any more or less aware of the kind of preevent thinking that contributes to your best performance(s)?	-1	-2	-3	-4	-5	0	1	2	3	4 5
Did you become any more or less aware of the kind of feeling states contribute to your best performance(s)?	-1	-2	-3	-4	-5	0	1	2	3	4 5
Did you become any more or less aware of the kind of focus within the event that contributes to your best performance(s)?	-1	-2	-3	-4	-5	0	1	2	3	4 5

IV) Over the course of the season	got worse					same				much improved
constructively refocus before the event (when needed)?	-1	-2	-3	-4	-5	0	1	2	3	4 5
constructively refocus within the event (when needed)?	-1	-2	-3	-4	-5	0	1	2	3	4 5
get the most out of each training session?	-1	-2	-3	-4	-5	0	1	2	3	4 5
draw constructive lessons form setbacks or arrors?	-1	-2	-3	-4	-5	0	1	2	3	4 5
communicate openly or effectively	-1	-2	-3	-4	-5	0	1	2	3	4 5

V) How much do you feel the overall mental training program affected:	hindered					no effect				helped a lot
a. The positiveness of your thinking?	-1	-2	-3	-4	-5	0	1	2	3	4 5
b. Your feelings of personal control?	-1	-2	-3	-4	-5	0	1	2	3	4 5
c. The consistency of your performance?	-1	-2	-3	-4	-5	0	1	2	3	4 5

Where do you think you need the most work to continue to improve and refine your psychological skills?

Do you have any suggestions that you would like to see included in part of next season's mental training program?

Any other comments concerning this evaluation form or the mental training program?

con-

(con't)

I.) Year-end evaluation of sport psychology consultant

Based on your personal feelings, please assess the sport psychology consultant who worked with the team this past few months.

1. What were her strenghts?

2. What were her weaknesses?

3. In what way (if any) did she help you?

4. In what ways could she help you more, or better meet your needs?

5. Rate her overall effect:

	hindered					no effect					helped a lot
effect on you	-1	-2	-3	-4	-5	0	1	2	3	4	5
effect on team	-1	-2	-3	-4	-5	0	1	2	3	4	5
effeeffect on coach	-1	-2	-3	-4	-5	0	1	2	3	4	5

6. Rate her characteristics:

	not at all									yes, definitely
had useful knowledge about mental training that seemed to apply directly to me.	0	1	2	3	4	5	6	7	8	9 10
seemed willing to provide an individualized mental training program based on my input and needs.	0	1	2	3	4	5	6	7	8	9 10
seemed open, flexible and ready to collaborate/cooperate with me	0	1	2	3	4	5	6	7	8	9 10
had a positive, constructive attitude.	0	1	2	3	4	5	6	7	8	9 10
proved to be trustworthy	0	1	2	3	4	5	6	7	8	9 10
was easy for me to relate to (ie., I felt comfortable and understood).	0	1	2	3	4	5	6	7	8	9 10
fitted in with others connected with the team.	0	1	2	3	4	5	6	7	8	9 10
tried to help me draw upon my own strengths (ie., the things that already worked for me) in order to make my best performance more consistent.	0	1	2	3	4	5	6	7	8	9 10
tried to help me overcome possible problems, or weaknesses in order to make my best performance better and more consistent.	0	1	2	3	4	5	6	7	8	9 10
Provided clear, practical, concrete strategies for me to try out in an attempt to solve problems to improve my level and consistency of performance.	0	1	2	3	4	5	6	7	8	9 10

These competitive plans were used to preplan imagery technique utilization for league games. For references see: Orlick, 1980; Orlick, 1986a; and Orlick 1986b.

In your own words and in as much detail as possible describe:
A typical 'day in your life' as an athlete, student, and person.
Address the part that volleyball plays in this overall experience.
Address the part that academics plays in this overall experience.
Address the part that social acspects play in this overall experience.
Consider as well, both the physcial and psychological factors involved and influencing your experiences.